OF TOUCHING LIVES THROUGH INNOVATION

ANNUAL REPORT 2024/25

science, technology & innovation
Department:
Science, Technology and Innovation
REPUBLIC OF SOUTH AFRICA

CSIR
Touching lives through innovation
80th anniversary

"The objects of the CSIR are, through directed and particularly multidisciplinary research and technological innovation, to foster, in the national interest and in fields which, in its opinion, should receive preference, industrial and scientific development, either by itself or in co-operation with principals from the private or public sectors, and thereby contribute to the improvement of the quality of life of the people of the Republic, and to perform any other functions that may be assigned to the CSIR by or under this Act."

(Scientific Research Council Act 46 of 1988, as amended by Act 27 of 2014)

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PART A GENERAL INFORMATION

The CSIR is a leading scientific and technology research organisation that researches, develops, localises and diffuses technologies to accelerate socioeconomic prosperity in South Africa. The organisation's work contributes to industrial development and supports a capable state. The organisation plays a key role in supporting government's programmes through directed research that is aligned with the country's priorities, the organisation's mandate and its science, engineering and technology competencies.

GENERAL INFORMATION

Registered name	Council for Scientific and Industrial Research
Physical address	Meiring Naudé Road, Brummeria, Pretoria
Postal address	PO Box 395, Pretoria, 0001, South Africa
Telephone number	012 841 2911
Email address	Enquiries@csir.co.za
Website address	www.csir.co.za
External auditors	Auditor-General of South Africa
Bankers	ABSA

LIST OF ABBREVIATIONS/ACRONYMS

ACLS	Advanced Chemistry and Life Sciences
AF	African Female
AGSA	Auditor-General of South Africa
AI	Artificial Intelligence
AM	African Male
ARC	Audit and Risk Committee
B-BBEE	Broad-Based Black Economic Empowerment
CEO	Chief Executive Officer
CF	Coloured Female
CFO	Chief Financial Officer
CHPC	Centre for High Performance Computing
CIBA	Chartered Institute of Business Accountants
CM	Coloured Male
Covid-19	Coronavirus disease 2019
CSI	Corporate Social Investment
CSIR	Council for Scientific and Industrial Research
CSIR C^3	CSIR C-Cubed
DSTI	Department of Science, Technology and Innovation
ECL	Expected credit loss
EDP	Executive Development Programme
EPIC	Excellence, People-Centredness, Integrity and Collaboration
Exco	Executive Committee
FF	Foreign Female
FM	Foreign Male
FPP	Fraud Prevention Plan
FY	Financial year
GITs	Graduates-In-Training
GSM	Global System for Mobile Communication
HC	Human Capital
HEIs	Higher education institutions
Hons	Honours
HRSEC	Human Resources and Social and Ethics Committee
IAS	International Accounting Standards
IASB	International Accounting Standards Board
IBS	Inter-Bursary Support Programme
ICC	CSIR International Convention Centre
ICT	Information and Communication Technology
IF	Indian Female
IFRIC	International Financial Reporting Interpretations Committee
IFRS	International Financial Reporting Standards
IM	Indian Male
IoT	Internet of things

LIST OF ABBREVIATIONS/ACRONYMS *(continued)*

IP	Intellectual Property
ISO	International Organisation for Standardisation
IT	Information Technology
KPIs	Key Performance Indicators
KZN	KwaZulu-Natal
LMDP	Leadership and management development training programmes
MerSETA	Manufacturing Engineering and Related Services
MMP	Mandela Mining Precinct
MoU	Memorandum of Understanding
MSc	Master of Science
NCPC-SA	National Cleaner Production Centre of South Africa
NEAP	National Economically Active Population
NFTN	National Foundry Technology Network
NICIS	National Integrated Cyber Infrastructure System
NMU	Nelson Mandela University
NSF	National Skills Fund
NSW	National Science Week
NT	National Treasury
NWU	North-West University
OCI	Other Comprehensive Income
PC	Portfolio Committee
PFMA	Public Finance Management Act
PG	Parliamentary Grant
PhD	Doctor of Philosophy
PPE	Property, Plant and Equipment
(Pty) Ltd	Proprietary limited
RD&I	Research, development and innovation
RDIC	Research, Development and Innovation Committee
REDZs	Renewable Energy Development Zones
RG	Research group
RIR	Recordable Incident Rate
RT&D	Eskom Research, Testing and Development
SA	South Africa
SALGA	South African Local Government Association
SANDF	South African National Defence Force
SET	Science, Engineering and Technology
SETA	Sector Education Training Authority
SHE	Safety, Health and Environment
SHEQ	Safety, Health, Environment and Quality
SMMEs	Small, medium and micro enterprises
SO	Strategic Objective
SOEs	State-owned enterprises
STEMI	Science, Technology, Engineering, Mathematics and Innovation
STI	Science, Technology and Innovation
STI	Short-term incentive
the dtic	Department of Trade Industry and Competition
TIA	Technology Innovation Agency
UAV	Unmanned aerial vehicles
UCT GSB	University of Cape Town Graduate School of Business
UNDP	United Nations Development Programme
UNISA	University of South Africa
UP	University of Pretoria
WF	White Female
WIL	Work integrated learning
Wits	University of the Witwatersrand
WM	White Male
YES	Youth Employment Services

Foreword by the Chairperson

Vuyani Jarana
Chairperson of the Board

The CSIR continues to play a critical role in addressing South Africa's developmental challenges, particularly the persistent triple issues of poverty, unemployment and inequality. This role is embedded in our founding mandate to drive scientific and industrial development in support of inclusive economic growth and the creation of a capable state.

In 2025, we mark 80 years of the CSIR's existence. For eight decades, the organisation has pioneered science and innovation in service of society. This milestone is an opportunity not only to reflect on our legacy but also to renew our commitment to touch more lives through innovation as we respond to the country's evolving challenges.

The CSIR is a Schedule 3B national government business enterprise and we assess its effectiveness by how well it implements research, development and innovation initiatives on behalf of government departments, state-owned enterprises (SOEs) and industrial partners. These efforts must yield measurable improvements in service delivery, competitiveness, job creation and transformation.

I am proud to report that the CSIR has performed exceptionally during the 2024/25 financial year. The organisation achieved or exceeded 29 of its 31 key performance indicators, with particularly strong progress in projects supporting the public sector. A 22% increase in government and SOE projects, in comparison to 2023/24, highlights our alignment with national priorities and reinforces the organisation's value to the state.

The Board notes with appreciation the continued implementation of the CSIR strategy launched in 2019/20. In its sixth year, the strategy continues to guide the organisation towards greater relevance, sustainability, impact and growth. The CSIR has enhanced its support to small, medium and micro enterprises, expanded international partnerships and deepened its commercialisation efforts through its enterprise, CSIR C^3. These initiatives position the organisation well to translate research into real-world solutions that advance industrial development.

From a governance perspective, the Board has maintained a clear focus on oversight, risk management and strategic alignment. The Board held regular engagements throughout the year, including a dedicated strategic session to review long-term priorities and organisational sustainability. Particular attention was given to strengthening the CSIR's innovation pipeline, enhancing stakeholder value and ensuring the ongoing transformation of its workforce and leadership.

In 2025, we mark 80 years of the CSIR's existence. For eight decades, the organisation has pioneered science and innovation in service of society. This milestone is an opportunity not only to reflect on our legacy but also to renew our commitment to touch more lives through innovation as we respond to the country's evolving challenges.

The organisation remains crucial for the government to realise the National Development Plan, Vision 2030, and other transformation agendas such as the Economic Reconstruction and Recovery Plan and the 2019 National Policy on Science, Technology and Innovation, among others. Our efforts also continue to support industrial development. In support of this, the Board has encouraged structured engagement with key stakeholders, including government departments, industry bodies and international innovation networks, to reinforce the CSIR's role as a trusted national science and technology partner.

While the Board is encouraged by the CSIR's resilience and achievements, we are mindful of the persistent challenges facing the broader research and development environment. A sustained decline in public funding, rising input costs and global uncertainties continue to exert pressure on innovation institutions. It is imperative that research and development are recognised not as a cost but as a long-term investment in national development and competitiveness.

The CSIR's leadership has embraced these challenges with determination. Through innovation, agility and strong values, the organisation continues to deliver meaningful impact. The Board remains confident in the strategic direction set by management and will continue to support the CSIR in building a future-focused organisation that serves all South Africans.

On behalf of the Board, I wish to thank the Minister of Science, Technology and Innovation, Dr Blade Nzimande, for his guidance and continued support. I also thank my fellow Board members for their dedicated oversight and strategic contributions. Most importantly, I extend my deepest appreciation to the executive leadership and the entire CSIR staff. Your excellence, integrity and drive are what make the CSIR a beacon of innovation in South Africa and beyond.

As we look to the future, we do so with optimism and purpose. We are building on 80 years of science that touches lives — and we are ready to shape the next era with bold, inclusive innovation.

Molaetša go tšwa go modulasetulo

Vuyani Jarana
Modulasetulo wa Boto ya CSIR

CSIR e tšwela pele go kgatha tema ye bohlokwa go šogana le ditlhohlo tšeo di golago tša Afrika Borwa, kudu ditaba tše tharo tša bohloki, go hloka mošomo le go se lekalekane. Karolo ye e tsentšwe go taolelo ya rena ye e hlomilwego go sepetša tšweletšopele ya saense le intasteri go thekga kgolo ya ekonomi yeo e akaretšago batho ka moka le go hlola mmušo wa bokgoni.

Ka 2025, re keteka mengwaga ye 80 ya go ba gona ga CSIR. Mo pakeng ya mengwaga ye 80 ye e fetilego, mokgatlo wo o be o eteletše pele saense le tšweletšopele go šomela setšhaba. Katlego ye ke sebaka e sego fela go naganišiša ka bohwa bja rena eupša gape go mpshafatša boikgafo bja rena bja go kgwatha maphelo a mantši ka tšweletšopele ge re arabela ditlhohlo tše di tšwelago pele tša naga.

CSIR ke kgwebo ya mmušo ya Lenaneo la 3B gomme re ela bokgoni bja yona ka mokgwa wo e phethagatšago mananeo a dinyakišišo, tlhabollo le tšwelotšopele legatong la mmušo, dikhamphani tša mmušo (diSOE) le balekani ba intasteri. Maitapišo a swanetše go tšweletša dikaonafatšo tše di elwago gabotse go kabo ya ditirelo, phadišano, go hlola mešomo le phetogo.

Ke thaba go le begela gore CSIR e šomile gabotse kudu mo ngwageng wa ditšhelete wa 2024/25. Mokgatlo wo o fihleletše goba o fitile 29 ya dišupi tša phethagatšo ya wona tše 31, gomme e bile le tšwelopele ye maatla diprotšekeng tšeo di thekgago lekala la setšhaba. Koketšego ya 22% diprotšekeng tša mmušo le SOE, ge e bapetšwa le 2023/24, e bontšha go sepelelana ga rena le dinepo tša bohlokwa tša naga gomme e matlafatša boleng bja mokgatlo wo go mmušo.

Boto e lemoga le go leboga phethagatšo ye e tšwelago pele ya leano la CSIR leo le hlomilwego ka 2019/20. Ngwageng wa lona wa botshela, leano le tšwela pele go hlahla mokgatlo go ya go bohlokwa bjo bogolo, go swarelela, khuetšo le kgolo. CSIR e kaonafaditše thekgo ya yona go dikgwebopotlana, dikgwebo tša magareng le dikgwebo tše dinnyane, e katološitše ditirišano tša boditšhabatšhaba gomme ya matlafatša maitapišo a yona a kgwebišo ka kgwebo ya yona, CSIR C³. Mananeo a a bea mokgatlo gabotse go fetolela dinyakišišo go ba ditharollo tša lefase la nnete tšeo di tšweletšago pele tlhabollo ya intasteri.

Go tšwa lehlakoreng la mmušo, Boto e swareletše nepišo ya go kwagala go diphošo, taolo ya dikotsi le go sepelelana ga leano. Boto e bile le dikopano tše di tlwaelegilego mo ngwageng ka moka, go akaretša le kopano ye e ikgethilego ya leano go sekaseka dinepo tša nako ye telele le tshwarelelo ya mokgatlo. Šedi ye kgolo e beilwe go go matlafatša tsela ya tšwelotšopele ya CSIR, go kaonafatša boleng bja bakgathatema le go netefatša phetogo ye e tšwelago pele ya bašomi le boetapele bja yona.

Mokgatlo wo o dula o le bohlokwa gore mmušo o kgone go lemoga Leano la Tšwelotšopele la Bosetšhaba, Pono ya 2030, le mananeo a mangwe a phetogo a bjalo ka Tsošološo le Kaonafatšo ya Ekonomi le Pholisi ya Bosetšhaba ya Saense ya 2019, Theknolotši le Tšwelotšopele, gareng ga tše dingwe. Maitapišo a rena gape a tšweletša go thekga tlhabollo ya intasteri. Go thekga se, Boto e hlohleleditše dipoledišano tše di beakantšwego le bakgathatema ba bohlokwa, go akaretšwa mafapha a mmušo, mekgatlo ya intasteri le mekgatlo ya boditšhabatšhaba ya tšweletšopele, go matlafatša seabe sa CSIR bjalo ka modirišani wa go tshepega wa saense le theknolotši ya bosetšhaba.

Le ge Boto e hlohleletšwa ke maatla le diphihlelelo tša CSIR, re lemoga ditlhohlo tšeo di tšwelago pele tšeo di lebanego le tikologo ye kgolo ya dinyakišišo le tšweletšopele. Go gwahlafala mo go tšwelago pele ga thekgo ya ditšhelete go setšhaba, ditshenyagelo tše di golelago godimo tša tšweletšo le dikgonono tša lefase di tšwela pele go fa dihlongwa tša tšweletšopele kgatelelo. Go bohlokwa gore dinyakišišo le tlhabollo di lemogwe e sego bjalo ka tshenyegelo eupša bjalo ka peeletšo ya nako ye telele mo tlhabollong ya bosetšhaba le kgoketšo.

Boetapele bja CSIR bo amogetše ditlhohlo tše ka maikemišetšo. Ka tšweletšopele, karabelo le ditshenyagelo tše maatla, mokgatlo o tšwela pele go tšweletša khuetšo ye bohlokwa. Boto e dula e na le boitshepo go mokgwa wa leano wo o beakantšwego ke taolo gomme e tla tšweletša go thekga CSIR go ageng mokgatlo wo o nepišitšego bokamoso wo o šomelago MaAfrika Borwa ka moka.

Legatong la Boto, ke rata go leboga Tona ya Saense, Theknolotši le Tšweletšopele, Dr Blade Nzimande, ka tlhahlo ya gagwe le thekgo ye e tšwelelago pele. Ke leboga gape maloko a Boto ka taolo ya bona ya boikgafo le tema ye ba e kgathilego go leano. Sa bohlokwa kudu, ke leboga kudu taolophethiši le bašomi ka moka ba CSIR. Bokgoni bja lena, botshepegi le tshepedišo ke tšeo di dirago gore CSIR e be leswao la tšweletšopele ka Afrika Borwa le dinageng tša ka ntle.

Ge re lebelela bokamoso, re dira bjalo ka kholofelo le nepo. Re aga godimo ga mengwaga ye 80 ya saense yeo e kgwathago maphelo — gomme re itokišeditše go hlama nako ye e latelago ka boitshepo, tšweletšopele yeo e akaretšago batho ka moka.

Umyalezo ovela kusihlalo

Vuyani Jarana
USihlalo Webhodi Ye-CSIR

I-CSIR iyaqhubeka nokubamba iqhaza elisemqoka ekusingatheni izinselelo zentuthuko yaseNingizimu Afrika, ikakhulukazi izinkinga ezintathu eziphikelelayo zobumpofu, ukungasebenzi nokungalingani. Le ndima igxilile emsebenzini wethu wokusungula ukuze sigqugquzele ukuthuthukiswa kwesayensi nezimboni ukuxhasa ukukhula komnotho okubandakanya wonke umuntu kanye nokwakhiwa kukahulumeni okwaziyo ukusebenza.

Ngo-2025, sigubha iminyaka engu-80 yokuba khona kwe-CSIR. Sekungamashumi ayisishiyagalombili eminyaka, le nhlangano igqugquzela isayensi nobuchwepheshe ekusebenzeleni umphakathi. Le ngqophamlando iyithuba lokungagcini nje ngokucabanga ngefa lethu kodwa nokuvuselela ukuzibophezela kwethu ekuthinteni izimpilo ezengeziwe ngokusungula izinto ezintsha kuyilapho sibhekana nezinselelo zezwe ezishintshayo.

I-CSIR iyibhizinisi likahulumeni likazwelonke leShejuli 3B futhi sihlola ukusebenza kwalo kahle endleleni elisebenzisa ngayo ucwaningo, ezentuthuko nezokusungula egameni leminyango kahulumeni, amabhizinisi kahulumeni (ama-SOE) kanye nozakwethu bezimboni. Le mizamo kumele ilethe intuthuko engenakulinganiswa ekuhlinzekweni kwezinsiza, ekuncintisaneni, ekwakhiweni kwemisebenzi nasoguqukweni.

Ngiyaziqhenya ngokubika ukuthi i-CSIR yenze kahle kakhulu phakathi nonyaka wezimali ka-2024/25. Inhlangano ifinyelele noma yeqe izinkomba zayo zokusebenza ezingu-29 kwezingu-31, nenqubekela phambili enamandla ikakhulukazi kumaphrojekthi asekela umkhakha womphakathi. Ukwanda okungu-22% emisebenzini kahulumeni neye-SOE, uma kuqhathaniswa nalokho kuka-2023/24, kugqamisa ukuhambisana kwethu nezinto eziza kuqala kuzwelonke futhi kugcizelela ukubaluleka kwenhlangano kuhulumeni.

IBhodi liphawula ngokubonga ukuqhubeka nokusetshenziswa kwecebo le-CSIR okwaqaliswa ngo-2019/20. Ngonyaka walo wesithupha, lelisu liyaqhubeka liqondisa inhlangano ekusebenzeni kakhudlwana, ekusimameni, ekubeni negalelo nasekukhuleni. I-CSIR ithuthukise ukuxha kwayo emabhizinisini asafufusa, aphakathi nendawo namancane, yandisa ubudlelwano bamazwe omhlaba futhi yajulisa imizamo yayo yokuhweba ngebhizinisi layo, i-CSIR C³. Lezi zinyathelo zibeka le nhlangano endaweni ekahle ukuze ishintshe ucwaningo lube yizixazululo zomhlaba wangempela ezithuthukisa intuthuko yezimboni.

Ngokombono wokuphatha, Ibhodi ligcine ukugxila okucacile ekwengameleni, ekulawuleni ubungozi nasekuqondiseni amasu. Ibhodi libe nezingxoxo njalo kuwo wonke unyaka, okubandakanya iseshini yamasu yokubuyekeza izinto ezibalulekile zesikhathi eside kanye nokusimama kwenhlangano. Kwagxilwa ngokukhethekile ekuqiniseni umzila wokusungula we-CSIR, ekuthuthukiseni inani lababambiqhaza nokuqinisekisa ushintsho oluqhubekayo lwabasebenzi nabaholi balo.

Le nhlangano isalokhu ibalulekile kuhulumeni ukuba afeze Uhlelo Lwezentuthuko Kazwelonke, Umbono ka-2030, namanye ama-ajenda enguquko afana ne-Economic Reconstruction and Recovery Plan kanye neNqubomgomo Kazwelonke yeSayensi, Ubuchwepheshe Nokusungula ka-2019, phakathi kokunye. Imizamo yethu nayo iyaqhubeka nokusekela intuthuko yezimboni. Ukuze kusekelwe lokhu, iBhodi ikhuthaze ukuzibandakanya okuhleliwe nababambiqhaza abayinhloko, okuhlanganisa iminyango kahulumeni, izinhlaka zezimboni kanye namanethiwekhi okusungula izinto ezintsha amazwe ngamazwe, ukuze kuqiniswe indima ye-CSIR njengophathina wezwe wesayensi nobuchwepheshe othembekile.

Nakuba iBhodi ikhuthazwa ukuqina kwe-CSIR kanye nempumelelo yayo, siyazazi izinselele eziphikelelayo ezibhekene nendawo ebanzi yocwaningo nentuthuko. Ukwehla okuqhubekayo kwezimali zomphakathi, ukukhuphuka kwezindleko zokufaka imali nokungaqiniseki komhlaba wonke kuyaqhubeka nokucindezela izikhungo zokusungula izinto ezintsha. Kubalulekile ukuthi ucwaningo nentuthuko kungabhekwa njengezindleko kodwa njengotshalomali lwesikhathi eside ekuthuthukiseni nasekuncintisaneni kwezwe.

Ubuholi be-CSIR buye bamukela lezi zinselele ngokuzimisela. Ngokusungula izinto ezintsha, ukukhuthala kanye nezimiso eziqinile, inhlangano iyaqhubeka iba negalelo elisemqoka. Ibhodi lihlala liwethemba amasu ayisiqondiso abekwe abaphathi futhi lizoqhubeka nokweseka i-CSIR ekwakheni inhlangano egxile esikhathini esizayo esebenzela bonke abantu baseNingizimu Afrika.

Egameni leBhodi, ngifisa ukubonga uNgqongqoshe Wezesayensi, Ubuchwepheshe Nokusungula, uSolwazi Blade Nzimande, ngesiqondiso sakhe nokusekela okuqhubekayo. Ngibonga namalungu eBhodi engikanye nawo ngokwengamela kwabo okuzinikele nokuba neqhaza emaswini. Okubaluleke kakhulu, ngibonga kakhulu ubuholi obuphethe nazo zonke izisebenzi ze-CSIR. Ukwenza kahle kakhulu kwenu, ubuqotho nokugqugquzela yikho okwenza i-CSIR ibe isibani sokusungula izinto ezintsha eNingizimu Afrika nangale kwayo.

Njengoba sibheka esikhathini esizayo, sikwenza ngethemba nangenhloso. Sakhela eminyakeni engu-80 yesayensi ethinta ukuphila — futhi sikulungele ukubumba inkathi elandelayo ngokusungula okunesibindi, nokubandakanya wonke umuntu.

Message from the CEO

Dr Thulani Dlamini
CSIR Chief Executive Officer

I am pleased to present the Annual Report of the Council for Scientific and Industrial Research (CSIR) for the 2024/25 financial year (FY).

This report reflects our continued efforts to support South Africa's re-industrialisation, inclusive growth and the development of a capable state through science, technology and innovation.

In the sixth year since the launch of our 2019/20 strategy, we have remained committed to amplifying the "I" in CSIR through research, development and innovation that meets national needs while remaining true to our EPIC values and deepening our research capabilities. Our strategic intent of growth, sustainability, impact and relevance has continued to shape our decisions and drive our performance.

In 2024/25, we once again exceeded the majority of our performance targets, achieving 29 out of 31 key performance indicators. Here are some highlights in comparison to the 2023/24 FY:

- An 11% increase in localised technologies;
- A 17% rise in joint technology development agreements with industry;
- A 3% increase in small, medium and micro enterprises supported;
- A 22% increase in projects implemented for government and state-owned entities;
- 27% increase in publication equivalents;
- 31% increase in the number of chief researchers; and
- A net profit of R40.62 million, against a projected loss of R67.6 million.

These results demonstrate the CSIR's ability to deliver innovative, value-adding solutions to industry and government partners. They also reflect our growing relevance in advancing South Africa's industrial development and our role as a trusted partner of the state.

Our strategy has yielded significant results in forging deeper partnerships with industry, government and higher education institutions. For the reporting year, our collaboration with public sector entities reached its highest level since 2019. Projects ranged from predictive models for the national and provincial elections to frameworks for transforming taxi ranks into economic hubs and environmental assessments that support the green hydrogen economy. These initiatives illustrate the breadth of our capabilities and the alignment of our work with national priorities.

Human capital development remains central to our success, and I am proud to highlight notable achievements of several colleagues, including two who won at the 26th NSTF-South32 Awards 2024.

Prof. Patience Mthunzi-Kufa, the CSIR Research Group Leader for Biophotonics, was honoured with the TW Kambule-NSTF Award: Researcher. She received this accolade in recognition of her research on the construction and application of photonics-based diagnostic devices for point-of-care detection of Human Immunodeficiency Virus-1, Tuberculosis, Covid-19, as well as non-communicable diseases, to achieve early detection and facilitate timely treatment.

Prof. Linda Godfrey, Manager of Circular Innovation South Africa, was awarded the Green Economy Award for her leading role in advancing South Africa's waste and circular economy through science, technology and innovation. Her contributions include the development and implementation of the Waste Research, Development and Innovation Roadmap for the Department of Science, Technology and Innovation, along with significant contributions to local and international waste and circular economy initiatives.

CSIR environmental scientist **Abulele Adams** has been appointed as Executive Director of the International Association for Impact Assessment (IAIA) Board, the leading global network for best practices in the use of impact assessment for informed decision-making on policies, programmes, plans and projects. In this role, she oversees matters that will advance environmental stewardship and sustainability in impact assessment.

Prof. Adnan Abu-Mahfouz, the chief researcher and manager of the CSIR Centre for Emerging Digital Technologies for the Fourth Industrial Revolution, has been recognised on Stanford University's 2024 Top Scientists List, which honours the top 2% of scientists worldwide. This list, compiled in collaboration with Elsevier, is based on scientific metrics such as the H-index, citation counts and other indicators of research impact and excellence. His inclusion reflects the global relevance and influence of his research, as evidenced by the frequency with which his work is cited by other scientists.

We invested over R11 million in training CSIR staff. Our staff complement has grown to 2 298, with science, engineering and technology (SET) staff making up 70% of the total. We are proud to report continued transformation, with 73% of SET staff being black South Africans and 40% female. Through targeted initiatives such as the Accelerated Researcher Development Programme and our staff dependants' bursary scheme, we continue to invest in the development of a representative and future-ready workforce.

We also made major strides in technology commercialisation. The organisation signed 12 new license agreements with industry partners. The establishment of CSIR C³ has accelerated our efforts to translate intellectual property into impact. Key technologies such as MycoSure, Stratafy and Herbathone™ have moved closer to market, supported by collaborations with partners. Our portfolio of license agreements and technology demonstrators reflect a maturing innovation pipeline.

Financially, we continue to diversify our income streams to ensure sustainability in a constrained funding environment. The organisation achieved a net profit of R40.62 million, exceeding the targeted loss of R67.6 million by R108.22 million. This represents an increase of R4.15 million compared to the net profit recorded for the previous financial year and demonstrates a significant improvement in financial performance, particularly in light of the reduced baseline parliamentary grant. Income from the South African public sector accounted for 64% of total revenue, exceeding the target of 58% by 6%. Conversely, income from the South African private sector amounted to R244.57 million, representing 7% of total income, while international sector income totalled R356.22 million, representing 10% of total income. Both contributions were one percentage point below their respective targets.

Our performance in terms of governance remains exceptional. During the year under review, the CSIR achieved a recordable incident rate of 0.12 - well below the target threshold of 0.4 - reinforcing our commitment to a zero-harm working environment. The organisation maintained compliance with international safety, health and environmental (SHE) standards and continued to advance its integrated SHE management system to ensure a safe, healthy and environmentally sustainable workplace.

We are also pleased to report that the CSIR maintained its Level 1 Broad-Based Black Economic Empowerment rating (BBBEE), reflecting our strong commitment to transformation and inclusive growth. Furthermore, the organisation once again received a clean audit opinion from the Auditor-General of South Africa, reaffirming the depth of our internal controls, financial reporting and compliance systems. These achievements underscore our dedication to transparency, accountability and ethical leadership across all areas of operation.

None of this would have been possible without the dedication and excellence of our staff. I extend my sincere gratitude to every CSIR employee who continues to embody our values of excellence, people-centredness, integrity and collaboration. Your passion and commitment to innovation have made this progress possible.

I also acknowledge the support and guidance of the CSIR Board and our shareholder Minister, Dr Blade Nzimande. Together, we are building an organisation that not only delivers world-class science and technology but also contributes meaningfully to South Africa's industrial and societal transformation.

As we look ahead, we do so with confidence and resolve. The foundations we have laid over the past six years have positioned us to deepen our impact. We will continue to harness science and technology to create a better future for all South Africans.

Molaetša go tšwa go CEO

Ngaka Thulani Dlamini
Mohlankedimogolophethiši, CSIR

Ke thabela go le abela Pego ya Ngwaga le Ngwaga ya Khansele ya Saense le Dinyakišišo tša Intasteri (CSIR) ya ngwaga wa ditšhelete (FY) wa 2024/2025.

Pego ye e bontšha maitapišo a rena a go tšwela pele go thekga go tšweletša gape ga diintasteri tša Afrika Borwa, kgolo ye e akaretšago batho ka moka le tlhabollo ya mmušo wa bokgoni ka saense, theknolotši le tšweletšopele.

Ke ngwaga wa botshela go tloga mola go thakgolwago leano la rena la 2019/20, re dutše re ikgafile go godiša "I" mo go "CSIR" ka dinyakišišo, tlhabollo le tšweletšopele tšeo di fihlelelago dinyakwa tša naga mola re sa lebale boleng bja rena bja EPIC le go katološa bokgoni bja rena bja dinyakišišo. Maikemišetšo a rena a leano la kgolo, go swarelela, khuetšo le go ba maleba di tšwetše pele go bopa diphetho tša rena le go sepediša phethagatšo ya rena.

Ka 2024/25, gape re fetile bontši bja dinepo tša rena tša dilebanywa tša phethagatšo, ra fihlelela 29 go tšwa go 31 ya dišupi tša phethagatšo tše bohlokwa. Tše ke tše dingwe tšeo di phagamego ge di bapetšwa le ngwaga wa ditšhelete wa 2023/24:

- Koketšego ya 11% go ditheknolotši tše di šomišwago mo nageng;
- Koketšego ya 17% go ditumelano tša tlhabollo ya theknolotši ye e kopantšwego le intasteri;
- Koketšego ya 3% go dikgwebopotlana, dikgwebo tša magareng le dikgwebo tše dinnyane tše di thekgwago;
- Koketšego ya 22% go diprotšeke tšeo di phethagaditšwego go mmušo le dikgwebo tša mmušo;
- Koketšego ya 27% go balekane ba diphatlalatšo;
- Koketšego ya 31% go palo ya banyakišišibagolo; le
- Poelo ya R40.62 milione, go fapana le tahlegelo ye e akantšwego ya R67.6 milione.

Dipoelo tše di bontšha bokgoni bja CSIR go aba ditharollo tše di tšwetšego pele le tšeo di oketšago boleng go badirišani ba intasteri le mmušo. Gape di bontšha go gola ga rena ga maleba mo go tšwetšeng pele ga tlhabollo ya intasteri ya Afrika Borwa le karolo ya rena bjalo ka modirišani wa mmušo.

Leano la rena le tšwelediše dipoelo tše bohlokwa tša go aga ditirišano tša go tsenelela le intasteri, mmušo le dihlongwa tša thuto ya godimo. Ngwageng wo wa pego, tirišano ya rena le dikarolo tša lekala la setšhaba e fihlile maemong a godimo go tloga ka 2019. Diprotšeke di ile tša tloga go dimmotlolo tša kakanyo tša dikgetho tša bosetšhaba le tša diprofense go ya go ditlhako ya go fetola direnke tša dithekisi go ya go dihapo tša ekonomi le ditekolo tša tikologo tšeo di thekgago ekonomi ya mohlagase wa go fehlwa ka moya le meetse. Mananeo a a bontšha bophara bja mabokgoni a rena le go sepelelana ga mošomo wa rena le dilo tša bohlokwa tša naga.

Tlhabollo ya mabokgoni a batho e dutše e le motheo wa katlego ya rena, gomme ke thabela go gatelela diphihlelelo tše bohlokwa tša bašomi ba malwa, go akaretšwa ba babedi bao ba thopilego Difoka tša bo 26 NSTF-South32 tša 2024.

Prof. Patience Mthunzi-Kufa, Moetapele wa Sehlopha sa Dinyakišišo sa CSIR sa Dipayofonetiki, o hlomphilwe ka Sefoka sa TW Kambule-NSTF: Monyakišiši. O amogetše sefoka sa gagwe go lemoga dinyakišišo tša gagwe mabapi le go aga le tirišo ya didirišwa tša go hlahloba tšeo di theilwego go difonetiki bakeng sa go lemoga *Human Immunodeficiency Virus-1, Tuberculosis, Covid-19*, gammogo le malwetši a go se fetele, go fihlelela go lemoga ka pela le go sepediša kalafo ka nako.

Prof. Linda Godfrey, Molaodi wa Tšweletšopele ya go Šomiša Didirišwa ka Afrika Borwa, o abetšwe Sefoka sa Ekonomi ya go Šomiša Mohlagase wa go fehlwa ka Meetse le Letšatši, ka mošomo wa gagwe wa go eta pele go tšwetšapele ekonomi ya dilahlwa le ya go šomiša didirišwa gape ka saense, theknolotši le tšweletšopele. Go kgatha tema ga gagwe go akaretša tlhabollo le phethagatšo ya Lenaneo la Dinyakišišo tša Dilahlwa, Tlhabollo le Tšweletšopele la Kgoro ya Saense, Theknolotši le Tšweletšopele, mmogo le go kgatha tema ga bohlokwa go dilahlwa tša mo gae le tša lefase ka moka go maneneo a ekonomi a go šomiša didirišwa gape.

Ramahlale wa tikologo wa CSIR **Abulele Adams** o kgethilwe bjalo ka Molaodimogolophethiši wa Boto ya Mokgahlo wa Boditšhabatšhaba wa Tekolo ya Khuetšo (IAIA), lenaneo la lefase la ketapele la ditirišo tše kaone go feta ka moka mo go tšeeng diphetho tša tsebo go dipholisi, mananeo, maano le diprotšeke. Mo mošomong wo, o hlokomela dilo tšeo di tlago tšwetšapele bohlokomedi bja tikologo le go swarela go tekolo ya khuetšo.

Prof. Adnan Abu-Mahfouz, monyakišišimogolo le molaodi wa Senthara ya CSIR ya Ditheknolotši tša Titšitale tše di Hlabologago tša Phetogo ya Intasteri ya Bone, o lemogilwe go Lenaneo la Boramahlale ba Godimo ba Yunibesithi ya Stanford la 2024, leo le hlomphago 2% ya boramahlale lefaseng ka moka. Lenaneo le, le kgobokeditšwe ka tirišano le Elsevier, Lenaneo le, leo le kopantšwego ka tiro mmogo le Elsevier, le theilwe godimo ga ditekanyo tša saense tše bjalo ka tšhupane ya H, palomoka ya ditsopolwa le ditšhupetšo tše dingwe tša khuetšo ya dinyakišišo le bokgoni. Go akaretšwa ga gagwe go laetša bohlokwa bja lefase le khuetšo ya nyakišišo ya gagwe, bjalo ka ge go bonagala ka morago ga moo mošomo wa gagwe o tsopotšwego ke boramahlale ba bangwe.

Re beeleditše go feta R11 milione go hlahleng bašomi ba CSIR. Palomoka ya bašomi ba rena e gotše go fihla go 2 298, moo bašomi ba saense, boentšenere le theknolotši (SET) ba dirago 70% ya palomoka. Re ikgantšha ka go bega phetogo ye e tšwelago pele, ka 73% ya bašomi ba SET e lego Maafrika Borwa a Bathobaso le 40% ya basadi. Ka mananeo ao a lebantšwego bjalo ka Lenaneo la Tlhabollo ya Banyakišiši leo le Potlakišitšwego le lenaneo la rena la dipasari tša bana ba bašomi, re tšwela pele go beeletša go tlhabollong ya bašomi bao ba ememelago le go itokišetša bokamoso.

Gape re dirile magato a magolo go kgwebišano ya theknolotši. Mokgahlo o saene ditumelano tše 12 tše mpsha tša dilaesense le badirišani ba intasteri. Tlhamo ya CSIR C³ e potlakišitše maitapišo a rena a go fetolela bohlale bja thoto go ba khuetšo. Ditheknolotši tše bohlokwa tše bjalo ka MycoSure, Stratafy le Herbathone™ di ile kgauswi le mebaraka, di thekgwa ke ditirišano le badirišani. Potfolio ya rena ya ditumelano tša laesense le babontšhi ba theknolotši di laetša tsela ya tšwelotšopele ye e golago.

Ka ditšhelete, re tšwela pele go fapantšha mananeo a rena a letseno go netefatša go swarelela mo tikologong ya magomo ya ditšhelete. Mokgahlo o fihleletše poelo ya motheo ya R40.62 milione, e feta selebanywa sa tahlegelo ya R67.6 milione ka R108.22 milione. Se se emela koketšo ya R4.15 milione ge e bapetšwa le poelo ya motheo yeo e begilwego ngwageng wa ditšhelete wo o fetilego gomme e bontšha kaonafalo ye kgolo go tiragatšo ya ditšhelete, kudu ge re ela hloko thušo ye e fokotšegilego ya palamente. Letseno go tšwa go lekala la setšhaba la Afrika Borwa le dirile palomoka ya 64%, le feta taelo ya 58% ka 6%. Go no swana le moo, letseno la R244.57 milione go tšwa go lekala la poraebete la Afrika Borwa e dirile 7% ya palomoka ya letseno, mola letseno go tšwa go lekala la boditšhabatšhaba le fihlile go R356.22 milione, yeo e emelago 10% ya palomoka ya letseno. Matseno ka bobedi a be a le 1% ya ntlha ka fase ga dinepo tša ona ka go latelana.

Phethagatšo ya rena go ya ka pušo e dula e le ye botse kudu. Ngwageng wo wa tshekatsheko, CSIR e fihleletše tekanyo ya ditiragalo tšeo di begilwego tša 0.12 – ka fase kudu go feta selebanywa sa nepo sa 0.4 - se se tiišago boikgafo bja rena go tikologo ya mošomo yeo e se nago kotsi. Mokgahlo o swere kobamelo le maemo a boditšhabatšhaba a polokego, maphelo le tikologo (SHE) gomme wa tšwela pele go godiša tshepedišo ya wona ya taolo ya SHE yeo e kopantšwego go netefatša lefelo la mošomo leo le bolokegilego, le le nago le maphelo a mabotse le leo le swarelelelago go tikologo.

Re thabile gape go bega gore CSIR e swere tekanyetšo ya yona ya Matlafatšo ya Ekonomi ya Bathobaso ba go Fapafapana ya Legato la 1 go bontšha boikgafo bja rena bjo bo tiilego go phetogo le kgolo yeo e akaretšago batho ka moka. Go feta moo, mokgahlo o amogetše gape tlhakišo ya go hlweka go tšwa go Motlhakišipharephare wa Afrika Borwa, go kgonthiša go tsenelela ga ditaolo tša ka gare, go bega ga ditšhelete le mananeo a kobamelo. Diphihlelelo tše ka moka di bontšha boikgafo bja rena bja go bea dilo pepeneneng, maikarabelo le boetapele bja maitshwaro go dikarolo ka moka tša phethagatšo.

Tše ka moka di be di ka se kgonagale ka ntle ga boikgafo le bokgoni bja bašomi ba rena. Ke rata go leboga kudu mošomi yo mongwe le yo mongwe wa CSIR yoo a tšwelago pele go tšweletša mešomo ye mebotse ya bokgoni, go hlokomela batho, go ba le maitshwaro le tirišano. Lerato le boikgafo go tšweletšopele bo dirile gore tšwelopele ye e kgonagale.

Ke amogela gape thekgo le tlhahlo ya Boto ya CSIR le Tona ya rena ya bengdišere, Dr Blade Nzimande. Mmogo, re aga mokgahlo wo o sa abego fela saense le theknolotši ya maemo a godimo eupša gape o kgatha tema ye bohlokwa go phetogo ya intasteri le setšhaba sa Afrika Borwa.

Ge re lebelela pele, re dira seo ka boitshepo le tharollo. Metheo yeo re e beilego mo mengwageng ye tshela yeo e fetilego e re beile maemong a go oketša khuetšo ya rena. Re tla tšwela pele go šomiša saense le theknolotši go hlama bokamoso bjo bobotse bja MaAfrika Borwa ka moka.

Umyalezo ovela ku-CEO

Dokotela Thulani Dlamini
Isikhulu Esiphezulu, CSIR

Ngiyajabula ukwethula Umbiko Wonyaka Womkhandlu Wokucwaninga Ngezesayensi Nezimboni (CSIR) wonyaka wezimali ka-2024/25 (FY).

Lo mbiko ubonisa imizamo yethu eqhubekayo yokweseka ukuvuselelwa kwezimboni, ukukhula okubandakanya wonke umuntu nokuthuthukiswa kukahulumeni onekhono lesayensi, ubuchwepheshe kanye nokusungula izinto ezintsha.

Ngonyaka wesithupha selokhu kwethulwa isu lethu lika-2019/20, siye saqhubeka sizibophezela ekukhuliseni u-"I" ku-CSIR ngocwaningo, intuthuko kanye nokusungula okuhlangabezana nezidingo zikazwelonke kuyilapho sihlale sithembekile ezimisweni zethu eziphawulekayo nasekujuliseni amakhono ethu ocwaningo. Inhloso yethu yamasu okukhula, ukusimama, umthelela kanye nokufaneleka iqhubekile nokubumba izinqumo zethu futhi iqhubekisele phambili ukusebenza kwethu.

Ngo-2024/25, siphinde sayeqa imigomo yethu eminingi yokusebenza, sazuza izinkomba zokusebenza ezibalulekile ezingu-29 kwezingu-31. Nazi ezinye izinto ezivelele uma kuqhathaniswa no-2023/24 FY:

- Ukukhula okungu-11% kwezobuchwepheshe bendawo;
- Ukukhuphuka okungu-17% ezivumelwaneni zokuthuthukiswa kobuchwepheshe obuhlangene nezimboni;
- Ukukhula okungu-3% emabhizinisini amancane, aphakathi nendawo namancane asekelwayo;
- Ukukhula okungu-22% kumaphrojekthi asetshenziswa kuhulumeni nasezinhlakeni zikahulumeni;
- Ukukhula okungu-27% kokulingana nokushicilelwa;
- Ukukhula okungu-31% kwenani labacwaningi abakhulu; futhi
- Inzuzo eyizigidi ezingu-R 40.62, uma kuqhathaniswa nokulahleka okucatshangelwayo kwezigidi ezingu-R67.6.

Le miphumela ibonisa ikhono le-CSIR lokuletha izisombululo ezintsha, ezengeza inani ezimbonini nakophathina bakahulumeni. Futhi zibonisa ukubaluleka kwethu okubheke phambili ekuthuthukiseni izimboni zaseNingizimu Afrika kanye nendima yethu njengophathina othembekile kahulumeni.

Isu lethu lithele izithelo ezibonakalayo ekwakheni ubudlelwano obuqinile nezimboni, uhulumeni nezikhungo zemfundo ephakeme. Ngalo nyaka esibika ngawo, ukubambisana kwethu nezinkampanizemikhakha yomphakathi kufinyelele ezingeni eliphakeme kakhulu kusukela ngo-2019. Amaphrojekthi asukela kumamodeli abikezelwayo okhethweni lukazwelonke nolwezifundazwe kuya ezinhlelweni zokuguqula amarenki amatekisi abe yizikhungo zomnotho kanye nokuhlolwa kwemvelo okusekela umnotho we-hydrogen eluhlaza. Lezi zinyathelo zibonisa ububanzi bamakhono ethu nokuqondanisa umsebenzi wethu nezinto eziza kuqala kuzwelonke.

Ukuthuthukiswa kwengqalasizinda yabantu kusewumgogodla wempumelelo yethu, futhi ngiyaziqhenya ngokugqamisa izimpumelelo eziphawulekayo zozakwethu abambalwa, okuhlanganisa nababili abawine emiklomelweni yama-26 ye-NSTF-South32 2024.

USolwazi Patience Mthunzi-Kufa, uMholi weQembu Lokucwaninga le-CSIR le-Biophotonics, uhlonishwe ngendondo ye-TW Kambule-NSTF: Umcwaningi. Uthole lokhu kuhlonishwa ngenxa yocwaningo lwakhe ekwakhiweni nasekusetshenzisweni kwamadivayisi okuxilonga asekelwe ku-photonics ukuze kuhlonzwe *i-Human Immunodeficiency Virus-1, Isifo Sofuba, i-Covid-19*, kanye nezifo ezithathelwanayo, ukuze zisheshe zitholakale futhi kube lula ukuzelapha ngesikhathi.

USolwazi Linda Godfrey, iMenenja ye-Circular Innovation South Africa, uklonyeliswe nge-Green Economy Award ngeqhaza lakhe elihamba phambili ekuthuthukiseni umnotho waseNingizimu Afrika wokulahlwa kwemfucuza kanye nokuzungezisa umnotho ngesayensi, ubuchwepheshe kanye nokusungula izinto ezintsha. Amagalelo akhe abandakanya ukuthuthukiswa nokuqaliswa koHlelo Locwaningo Lwemfucuza, Ukuthuthukiswa kanye Nokusungula Indlela entsha yoMnyango wezeSayensi, Ubuchwepheshe Nokusungula, kanye negalelo elibalulekile emizameni yokulahlwa kwemfucuza yasekhaya neyamazwe ngamazwe kanye nezinhlelo zomnotho eziyindilinga.

Usosayensi wezemvelo we-CSIR **u-Abulele Adams** uqokwe njengoMqondisi Ophethe we-International Association for Impact Assessment (IAIA) Board, inethiwekhi ehamba phambili yomhlaba wonke yezindlela ezingcono kakhulu zokusebenzisa ukuhlolwa komthelela ekwenzeni izinqumo ezinolwazi ngezinqubomgomo, izinhlelo, amapulani namaphrojekthi. Kulesi sikhundla, wengamele izindaba ezizothuthukisa ukuphathwa kwemvelo nokusimama ekuhlolweni komthelela.

Solwazi Adnan Abu-Mahfouz, umcwaningi omkhulu kanye nomphathi we-CSIR Centre for Emerging Digital Technologies for the Fourth Industrial Revolution, uhlonishwe ohlwini lwe-2024 Top Scientists lweYunivesithi yaseStanford, oluhlonipha ama-2% aphezulu ososayensi emhlabeni wonke.. Lolu hlu, oludidiyelwe ngokubambisana no-Elsevier, lusekelwe kumamethrikhi esayensi afana ne-H-index, okuyizibalo zokucaphuna nezinye izinkomba zomthelela ocwaningweni nokwenza kahle. Ukufakwa kwakhe kubonisa ukubaluleka komhlaba wonke kanye nomthelela wocwaningo lwakhe, njengoba kufakazelwa imvamisa lapho umsebenzi wakhe ucashunwa ngakho abanye ososayensi.

Sitshale imali engaphezu kwezigidi ezingu-R11 ekuqeqesheni izisebenzi ze-CSIR. Inani lezisebenzi zethu likhule laba ngu-2 298, kanti izisebenzi zesayensi, ubunjiniyela nobuchwepheshe (i-SET) zenza ama-70% engqikithi. Siyaziqhenya ngokubika ngoshintsho oluqhubekayo, njengoba u-73% wezisebenzi ze-SET kungabantu abamnyama baseNingizimu Afrika kanye no-40% wabesifazane. Ngezinhlelo ezihlosiwe ezifana ne-Accelerated Researcher Development Programme kanye nohlelo lwemifundaze yezisebenzi zethu, siyaqhubeka nokutshala imali ekuthuthukisweni kwezisebenzi abamelele nabalungele ikusasa.

Siphinde sathatha igxathu elikhulu ekuhwebeni kwezobuchwepheshe. Inkampani isayine izivumelwano zamalayisense ezintsha eziyi-12 nophathina bemboni. Ukusungulwa kwe-CSIR C³ kusheshise imizamo yethu yokushintsha impahla yengqondo ibe nomthelela. Ubuchwepheshe obubalulekile obufana ne-MycoSure, i-Stratafy ne-Herbathone™ sebusondele emakethe, busekelwa ukusebenzisana nozakwethu. Iphothifoliyo yethu yezivumelwano zamalayisense kanye nababonisi bezobuchwepheshe ibonisa izinto ezikhulu ezisesendleleni.

Ngokwezimali, siyaqhubeka nokuhlukanisa izindlela zezimali zethu ezingenayo ukuze siqinisekise ukusimama esimweni sokuthola imali esinezingqinamba. Inkampaniithole inzuzo eyizigidi ezingama-R40.62, idlula ukulahlekelwa okuhlosiwe kwezigidi ezingama-R67.6 ngezigidi ezingama-R108.22. Lokhu kumelela ukwanda kuka-R4.15 wezigidi uma kuqhathaniswa nenzuzo etholakalayo erekhodwe kunyaka wezimali odlule futhi kubonisa ukuthuthuka okuphawulekayo ekusebenzeni kwezezimali, ikakhulukazi uma kucatshangelwa isibonelelo esincishisiwe sephalamende. Imali engenayo evela embonini kahulumeni waseNingizimu Afrika ibalelwa ku-64% wesamba semali engenayo, idlule umgomo owawuhlosiwe wama-58% ngo-6%. Ngakolunye uhlangothi, inzuzo etholakele ezimbonini ezizimele zase Ningizimu Afrika ibalelwa kuzigidi ezingama-R244.57, okumele u-7% wenzuzo ephelele, ekubeni inzuzo etholakele ezimbonini zamazwe omhlaba ilinganiselwa kuzigidi ezingama-R356.22, okumeme u-10% wenzuzo ephelele. Lezi zinzuzo zibe ngaphansi ngephuzu elilodwa kulokhu obekuhleliwe.

Izinga lethu lokusebenza ngokwemibandela yokuphatha kusalokhu kuyingqayizivele. Kulo nyaka obuyekezwayo, i-CSIR izuze izinga lezehlakalo elirekhodikayo elingu-0.12 - ngaphansi kakhulu komkhawulo ohlosiwe ongu-0.4 - okuqinisa ukuzibophezela kwethu esimweni sokusebenza esingenabungozi. Inkampani iyaqhubeka ithobela imithetho yamazwe ngamazwe okuphepha, ezempilo nezemvelo (SHE) futhi iqhubekisele phambili uhlelo lwayo lokuphatha i-SHE oludidiyelwe ukuze kuqinisekiswe indawo yokusebenza ephephile, enempilo futhi enakekela imvelo.

Siyajabula futhi ukubika ukuthi i-CSIR igcine isilinganiso sayo se-Level 1 Broad-Based Black Economic Empowerment (BBBEE), okubonisa ukuzibophezela kwethu okuqinile ekuguqukeni nasekukhuleni okungabandlululi. Ngaphezu kwalokho, inkampaniiphinde yathola umbiko ohlanzekile wokucwaningwa kwamabhuku ovela kuMcwaningimabhuku-Jikelele waseNingizimu Afrika, eqinisekisa ukujula kwezilawuli zethu zangaphakathi, imibiko yezezimali kanye nezinhlelo zokuhambisana. Le mpumelelo igcizelela ukuzinikela kwethu ekungafihlini lutho, ekuziphenduleleni nasekuholeni ngokuziphatha kuzo zonke izici zokusebenza.

Akukho kulokhu obekungenzeka ngaphandle kokuzinikela nokwenza kahle kwezisebenzi zethu. Ngidlulisa ukubonga kwami kubo bonke abasebenzi be-CSIR abaqhubeka nokuqinisa ukusebenza kahle kwethu, ukugxila kubantu, ubuqotho nokusebenzisana. Uthando lwenu nokuzibophezela kwenu ekusunguleni izinto kwenze le nqubekela phambili yaba khona.

Ngiphinde ngibonge ukwesekwa nomhlahlandlela weBhodi le-CSIR kanye noNgqongqoshe wethu onamasheya, Dokotela Blade Nzimande. Ngokubambisana, sakha inkampanienganikezi nje kuphela isayensi nobuchwepheshe obusezingeni lomhlaba kodwa futhi enomthelela obonakalayo enguqukweni yezimboni nezenhlalo yaseNingizimu Afrika.

Njengoba sibheka phambili, sikwenza ngokuzethemba nangokuzimisela. Izisekelo esizenzile eminyakeni eyisithupha edlule zisibeke endaweni yokuthi siqinise umthelela wethu. Sizoqhubeka nokusebenzisa isayensi nobuchwepheshe ukwakha ikusasa elingcono kubo bonke abantu baseNingizimu Afrika.

STATEMENT OF RESPONSIBILITY FOR AND CONFIRMATION OF ACCURACY OF THE ANNUAL REPORT

To the best of our knowledge and belief, we confirm the following:

- All information and amounts disclosed in the annual report are consistent with the annual financial statements audited by the Auditor-General.
- The annual report is complete, accurate and free from any omissions.
- The annual report has been prepared in accordance with the guidelines on the annual report as issued by the National Treasury.
- The annual financial statements (Part G) have been prepared in accordance with the International Financial Reporting Standards applicable to the CSIR.
- The Accounting Authority is responsible for the preparation of the annual financial statements and the judgements made in this information.
- The Accounting Authority is responsible for establishing and implementing a system of internal control that has been designed to provide reasonable assurance as to the integrity and reliability of the performance information, the human resources information and the annual financial statements.
- The external auditors are engaged to express an independent opinion on the annual financial statements.
- In our opinion, the annual report fairly reflects the operations, performance information, human resources information and financial affairs of the CSIR for the financial year ended 31 March 2025.

Yours faithfully

Dr Thulani Dlamini
Chief Executive Officer
22 August 2025

Vuyani Jarana
Chairperson of the Board
22 August 2025

LEGISLATIVE AND OTHER MANDATES

The CSIR is listed as a Schedule 3B public entity in terms of the Public Finance Management Act (PFMA), 1999 (Act 1 of 1999) (as amended). The CSIR is constituted under the Scientific Research Council Act, 1988 (Act 46 of 1988), as amended. South Africa's legislative framework for entities applies to the CSIR, with the PFMA superseding all other legislation apart from the South African Constitution. The CSIR aligns with the government's transformation agenda and ensures compliance with the Public Preferential Procurement Frameworks Act (as amended) and the Broad-Based Black Economic Empowerment Act, 2003 (Act 53 of 2003) (as amended). As a research-generating entity, the CSIR adheres to all requirements of South Africa's intellectual property legislation.

STRATEGIC OVERVIEW

VISION

We are accelerators of socioeconomic prosperity in South Africa through leading innovation.

MISSION

Collaboratively innovating and localising technologies, while providing knowledge solutions for the inclusive and sustainable advancement of industry and society.

VALUES

Our beliefs, principles and the impact we wish to make to improve the quality of life of South Africans are EPIC. Team CSIR pursues excellence, celebrates people, personifies integrity and welcomes collaboration.

EXCELLENCE:

We strive for excellence and quality in everything that we do. We always strive to deliver solutions that surpass the expectations of our stakeholders. We hold each other to the highest possible standard in RD&I, as well as all other facets of CSIR business. We believe that excellence is a product of investing in the continuous development of our people, processes and ways of doing business.

PEOPLE-CENTRED:

Our business is about touching the lives of people — our employees and business partners. We care about people. We respect each other's diversity and conduct ourselves in a manner that upholds the dignity of every person. We believe in continuous personal development and encourage one another to seize opportunities for personal growth. We treat our stakeholders the way we like to be treated.

INTEGRITY:

We act with integrity. We are honest and fair when dealing with one another and our business partners. We respect the trust that our colleagues and stakeholders place in us, and commit to ethical decision-making, delivery and governance.

COLLABORATION:

We are keen to learn from one another, and collaborate across the organisation and with external partners to ensure that our work has the best chance of innovating a better future for South Africans. We actively share our knowledge and expertise by design, formally and informally, so that we can realise largescale impact.

THE CSIR BOARD

APRIL 2024 TO MARCH 2025

Vuyani Jarana
CEO, Ilitha Telecommunications

Dr Thulani Dlamini
CEO, CSIR

Maleke Matolong
Independent Consultant

Mahesh Fakir
Independent Consultant

Jules Newton
Executive Director, Innovation Green Business Value Chain Portfolio

Dr Vuyo Mthethwa
Deputy Vice Chancellor: People and Operations, Durban University of Technology

Prof. Arnold van Zyl
Retired President, Baden-Wuerttemberg Cooperative State University

Dr Christine Render
Independent Consultant

Michelle Govender
CEO, Octarity

Prof. Yunus Ballim
Retired Emeritus Professor, University of the Witwatersrand

Mike Mulcahy
CEO, GreenCape
Chairman of the International Cleantech Network

ORGANISATIONAL STRUCTURE

APRIL 2024 TO MARCH 2025

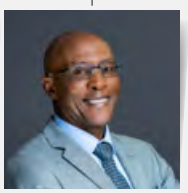
science, technology & innovation

Department:
Science, Technology and Innovation
REPUBLIC OF SOUTH AFRICA

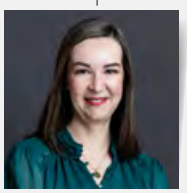
Vuyani Jarana
Chairperson of the Board

Dr Thulani Dlamini
CSIR Chief Executive Officer

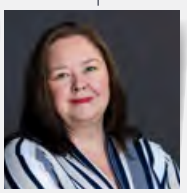
Dr Kaven Naidoo
Group Executive: Business Excellence and Integration



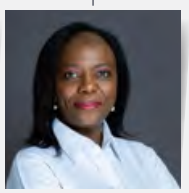
Andile Mabindisa
Group Executive: Human Capital and Communication



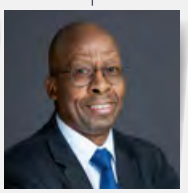
Esteé Opperman
Chief Financial Officer



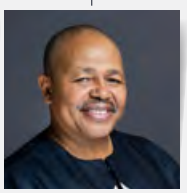
Adv. Esmé Kennedy
Group Executive: Legal, Compliance and Business



Dr Rachel Chikwamba
Group Executive: Advanced Chemistry and Life Sciences



Dr Sandile Malinga
Group Executive: Smart Society



Dr Motodi Maserumule
Group Executive: Advanced Production and Security

PART B
ORGANISATIONAL HIGHLIGHTS

A CSIR-developed biodegradable device that can detect *E. coli in* water faster than similar lateral flow detection devices. Below: Components of the CSIR-developed *E. coli* detection device. CSIR senior researcher Dr Vusani Mandiwana inspects an assembled *E. coli* detection device.

A BIODEGRADABLE RAPID TEST TO DETECT *E. COLI* IN WATER

The CSIR has developed a biodegradable single-use kit capable of detecting *E. coli* in water within six hours. This innovative solution is faster than existing lateral flow detection devices, simple enough for non-experts to use and circumvents the need for lengthy laboratory testing.

The technology is particularly beneficial in areas where untreated human waste contaminates groundwater or surface water used for drinking, irrigation, bathing or other household activities. It is especially suitable for use by municipalities responsible for managing sewage precipitation ponds. These ponds must be treated before releasing water into river systems. With this quick test, *E.coli* levels can be tested and safe water released within six hours – significantly quicker than waiting several days for laboratory results.

The CSIR-developed device incorporates systems that filter water, incubates the bacteria and multiplies it to a detectable level. Its novelty lies in the combination of a lateral flow strip and filtration system that mechanically engages a filter, opening a port that allows the lateral flow strip to access the growth medium within the filtration chamber. All these elements are integrated into a single, biodegradable unit.

Because the technology requires a minimum bacteria load for *E. coli* detection, it is ideal for industrial water treatment plants rather than household use.

The project was co-funded by the CSIR and the DSTI.

RAPID TESTS TO SCREEN FOOD CROPS FOR DESTRUCTIVE VIRAL INFECTIONS

New point-of-care virus diagnostic kits may soon help tomato, potato and banana farmers in South Africa detect outbreaks before they cause significant crop losses.

The CSIR, in partnership with the Agricultural Research Council, is developing antibody-based biotechnology rapid tests for tomato spotted wilt virus, pepper ringspot virus and banana bunchy top virus. While similar test kits can be imported from international suppliers, many are not effective in detecting local or indigenous viral strains.

To address this, the CSIR is using bacteria and plants to amplify proteins unique to these local strains. These proteins will then be used to create matching antibodies for use in diagnostics. Researchers have successfully expressed the viral proteins in *E. coli* bacteria and upscaling for mass spectrometry analysis to confirm the identity of each protein is currently underway. The next step involves expressing the same viral proteins in tobacco plants.

Using *E. coli* bacteria and tobacco plants to express viral proteins has proven significantly cheaper than conventional bioprocesses or production systems involving animals, mammalian cells, insect cells or other eukaryotic-based technologies.

Three antibody-based rapid tests will be developed to help safeguard tomato, potato and banana crop yields. This will support compliance with export standards and secure fair prices in global markets.

Dr Lusisizwe Kwezi (left), Dr Priyen Pillay and Dr Duduetsang Saku (back).


Dr Priyen Pillay inspects a protein gel. The CSIR is using bacteria and plants to amplify target proteins unique to local crop virus strains. These proteins will then be used to create matching antibodies for diagnostic application.


Dr Sibongile Mtimka, a CSIR researcher, analyses protein bands to verify the success of protein expression and purification in bacteria and plants.

CSIR DEVELOPS COMPOSTABLE FOOD PACKAGING SOLUTION

Researchers at the CSIR have developed biodegradable food packaging that blocks oxygen, helping to prevent spoilage and extend shelf-life.

The CSIR-developed packaging presents a sustainable alternative to conventional plastics that pollute the environment. Designed to retain its shape and integrity even at high temperatures, it is particularly suitable for ready-to-eat products – items often not recycled due to food contamination.

Unlike conventional plastic packaging, CSIR-developed polymers are highly biodegradable and easier to compost. A 120 µm thick film can fully biodegrade without the need for pre-treatment methods such as shredding or powdering.

Conventional polymers are less expensive than biodegradable polymers, but they ultimately bear a larger environmental and economic cost, often ending up in landfills if not recycled, while biodegradable polymers decompose and are environmentally friendly.

South African companies are increasingly exploring the use of sustainable packaging materials made from biodegradable polymers, in alignment with the country's environmental sustainability goals.

The development of this technology was co-funded by the CSIR and the Department of Science, Technology and Innovation.

Biodegradable polymer nanocomposites for packaging applications.

The biodegradable food packaging film produced at the CSIR pilot facility in Pretoria.

CSIR-developed industrially compostable packaging that demonstrates food preservation almost one year after packing.

The packaging blocks oxygen, thereby preventing spoilage and extending shelf-life.

NEW AI TOOL TO TACKLE FOOD SECURITY

Researchers in South Africa and the United Kingdom (UK) have developed a prototype software tool to help governments and policy makers to determine the impacts of hazards in food production systems.

Called the One Food Risk Tool, the prototype was developed by the CSIR in collaboration with the UK's Centre for Environment, Fisheries and Aquaculture Science. The CSIR contributed expertise in climate, nutrition, food production, animal health, AI and software development of the tool.

To date, the tool has been configured to evaluate the impact of more than 70 identified hazards across human, animal and environmental health domains it and can generate aggregated risk scores. The impact of several hazards on different food systems can be compared to determine what interventions and policies should be prioritised, for example whether pesticides should be promoted in a particular food production sector such as maize, due to their benefits for food production, despite their environmental impacts. The tool can also be used to develop strategies to prevent losses and constraints on the food supply. It forms part of the broader *One Food* programme, which aims to improve food security, sustainability and public health through a systemic approach.

Initial application of the tool will be on priority sectors such as poultry farming, where disease outbreaks can have significant socioeconomic impacts. Further development will expand the tool's artificial intelligence and predictive capabilities to analyse large datasets related to food systems, economic trends, climate conditions and diseases for local and international use.

Avian influenza outbreaks are a threat to poultry farmers. The final version of the One Food Risk Tool will feature advanced AI capabilities to predict such potential disease outbreaks and prescribe strategies to prevent losses and alleviate strains on the food supply.

The CSIR demonstrated a hydrogen-powered UAV using a hardware-in-the-loop technique, in which a real-time computer simulated the behaviour of the hydrogen-powered engine (front right).

RESEARCHERS DEMONSTRATE HYDROGEN FUEL CELL-POWERED UAV FOR GREEN AVIATION

CSIR researchers have, for the first time in South Africa, demonstrated hydrogen fuel cell-propulsion for UAVs. The system was developed by aerospace systems engineers and experts in carbon capture and utilisation at the CSIR, in collaboration with Hydrogen South Africa.

The aviation industry still largely relies on fossil fuels for propulsion. The benefits of hydrogen propulsion for UAVs include longer flight times due to higher fuel energy density, zero-emission potential, faster refuelling, reduced fuel weight and increased payload capacity. It also operates quietly, making it ideal for surveillance and reconnaissance missions.

Researchers used a hybrid fixed-wing, vertical take-off and landing UAV for the demonstration. Its modular design allows for rapid payload reconfiguration, making it adaptable for different mission types, such as patrolling, monitoring or surveillance.

While the hydrogen fuel cell research is still in the early development stage, once completed, a commercially viable fuel cell-propulsion system will be licensed to a local partner for industrialisation and commercialisation.

The multi-year project was initiated and funded by the Department of Science, Technology and Innovation.

SOUTHERN OCEAN RESEARCH CONTRIBUTES TO INTERNATIONAL UNDERSTANDING OF OCEAN CLIMATE CHANGE

A CSIR research study has found that climate models are underestimating the global decline in ocean productivity resulting from ocean warming. Declining ocean productivity has implications for fisheries, biodiversity and the climate's regulatory systems.

Ocean productivity refers to how much food and energy the ocean produces to support marine life and it is driven by phytoplankton – microscopic plants that live in the sunlit surface waters of the ocean. Phytoplankton also absorb carbon dioxide from the atmosphere.

The research, published in *Nature's* scientific journal *Communications Earth & Environment* in February 2025, follows an analysis of 26 years of remote sensing data and a comparison of these contemporary trends with future projections from a wide range of climate models.

The study was produced by CSIR researchers specialising in the Southern Ocean, as part of the Southern Ocean Carbon-Climate Observatory (SOCCO) programme, which is funded by the Department of Science, Technology and Innovation.

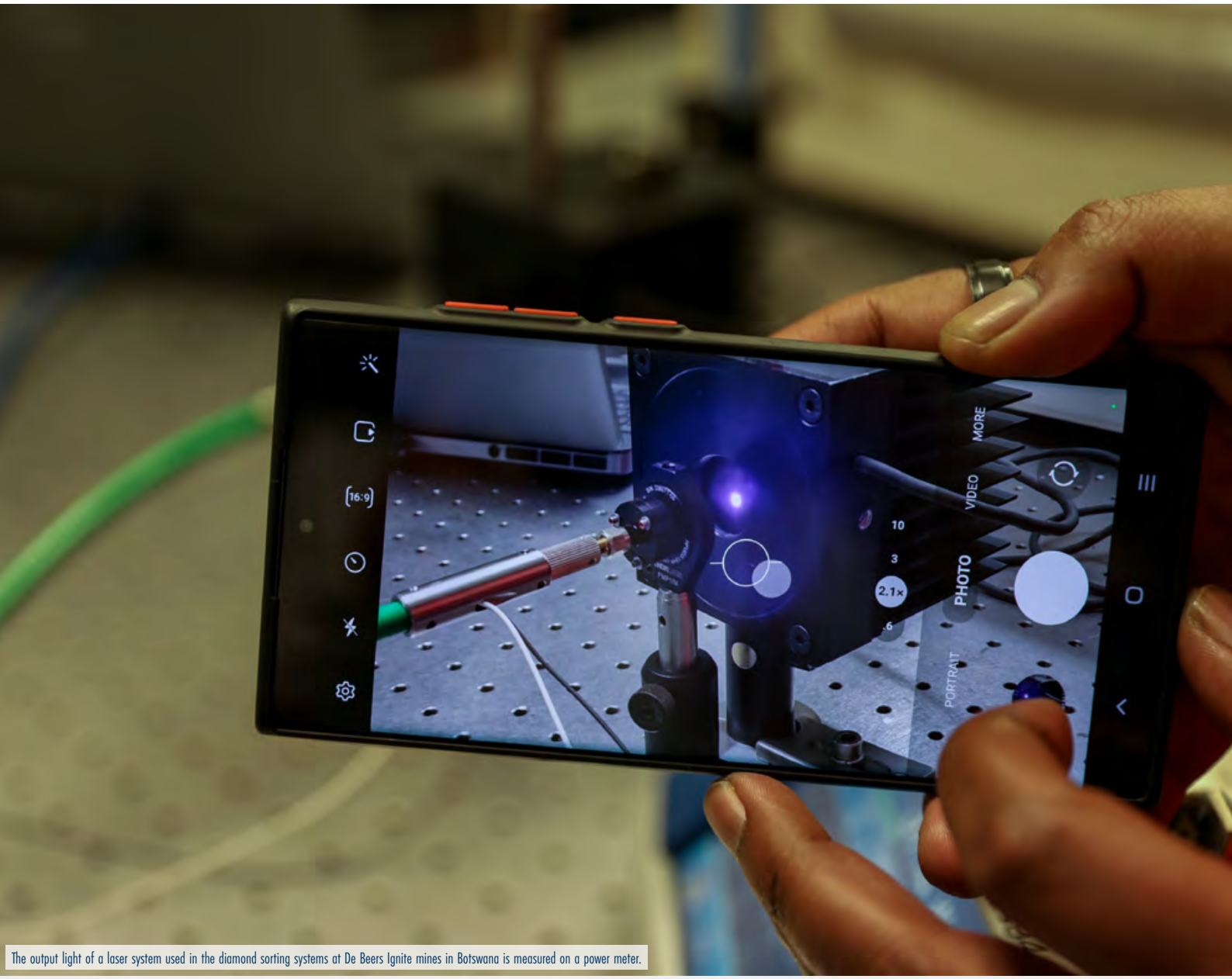
SOCCO researchers also contributed to a chapter on Antarctica and the Southern Ocean in an annual international review of the world's climate. The *State of the Climate in 2023* report was released by the National Oceanic and Atmospheric Administration in August 2024. Researchers assessed the 2023 anomalies (relative to climatology) in key physical and biological Southern Ocean metrics. The analysis revealed substantial ocean warming, with mostly positive anomalies in sea-surface temperatures, ocean heat content and air-sea heat flux. These changes may have been exacerbated by the warm conditions of the 2023 El Niño, with evidence of impacts on the ocean's biochemistry. These significant findings highlight the impact of changing atmospheric-ocean dynamics.

Furthermore, the journey of the SOCCO programme in developing a scientific niche in ocean climate change was featured in the 83rd edition of the United Nations' *CLIVAR Exchanges* journal, published in October 2024.

CSIR research group leader for the Southern Ocean Carbon-Climate Observatory Dr Sandy Thomalla (right) and CSIR senior researcher Dr Thomas Ryan-Keogh published research indicating that climate models are underestimating the global decline in the productivity of the oceans resulting from ocean warming.

02

Improve the competitiveness of high-impact industries to support South Africa's re-industrialisation by collaboratively developing, localising and implementing technology



The output light of a laser system used in the diamond sorting systems at De Beers Ignite mines in Botswana is measured on a power meter.

PRODUCTION OF FURTHER DIAMOND SORTING LASERS FOR DE BEERS IGNITE

The CSIR has developed five bespoke laser systems for integration into diamond sorting systems at De Beers Ignite mines in Botswana. This follows the successful operational performance of the first CSIR-developed industrial laser that was developed in 2022.

To the naked eye, diamonds and quartz appear similar. However, when a laser interacts with a diamond, it produces a signal that differs from that of quartz. The CSIR system utilises Raman spectroscopy to detect molecular structures, enabling the differentiation of diamonds from quartz despite their similar molecular signatures.

The laser system is the first fully integrated laser system used by De Beers. Its technical performance was evaluated at the CSIR Photonics Prototyping Facility – a laboratory environment used by inventors and entrepreneurs developing laser-based products and systems, such as three-dimensional printers, medical devices and optical detectors. The initial system has now been in operation for over two years, demonstrating stable and reliable performance. This achievement marks a significant milestone in the development of next-generation, high-tech systems using fourth industrial revolution capabilities.

TWO TERABYTES OF GENETIC SEQUENCE DATA SENT AT HIGH SPEED

The CSIR's supercomputing experts assisted a major African research institute in transferring vast amounts of genomic data to a Harvard University server in just 45 minutes – a process that would have initially taken over a month.

The data transfer was facilitated by the South African National Research Network (SANReN), which is managed and implemented by the CSIR.

SANReN is a key component of South Africa's National Integrated Cyberinfrastructure System and provides researchers with the tools to send and retrieve large datasets efficiently across global networks.

The Africa Health Research Institute (AHRI), which first collaborated with SANReN in 2019, regularly engages the team for support. In this case, AHRI needed to transfer two terabytes of raw genetic sequence data to a high-performance computing server at Harvard University in the United States of America. At AHRI's own achievable transfer speed of 700 kb-per-second, the process would have taken approximately 35 days.

Using its 100 GB-per-second data transfer nodes (DTNs) based in Johannesburg, SANReN completed the transfer in under an hour at a rate of eight GB-per-second.

SANReN maintains multiple DTNs across the country, consisting of specialised hardware and software optimised for high-speed, large-scale data transfers.

The South African National Research Network.

CSIR-developed advanced nano-reinforced polymer composite pellets.

Advanced nano-reinforced polymer composite for 3D printing produced by Filament Factory.

NEW ADVANCED NANO-REINFORCED MATERIAL ENGINEERED

The CSIR, in collaboration with Gauteng-based small business Filament Factory, has developed an advanced nano-reinforced polymer composite that offers electromagnetic interference shielding and enhanced electrical conductivity. These properties make it ideal for stealth technology and radar-absorbent materials. Its enhanced conductivity also broadens its potential use in high-tech applications such as conductive medical implants, sensors and electronic devices.

Developed using nanotechnology, the material stands out for its superior performance compared to traditional alternatives, combining strength and advanced functionality.

Available in granule and filament form, the material supports various manufacturing techniques like injection moulding, extrusion and three-dimensional printing. It is lightweight yet highly durable, making it suitable for industries that require high performance without added bulk.

It has a myriad of potential applications in a variety of sectors. In stealth technology, the composite can help reduce radar visibility of aircraft and drones. It also offers promise in civilian and military radar-absorbent infrastructure. In the medical field, its biocompatibility and conductivity make it ideal for advanced implants like neural interfaces and pacemakers. Its sensitivity to electromagnetic fields makes it suitable for environmental and industrial sensors.

A 3D-printed router prototype produced from the advanced nano-reinforced polymer composite.

BETTER, GREENER PLASTIC PRODUCTS FROM WASTE STREAMS

The CSIR has formulated a new biocomposite material using waste sawdust and recycled plastics as an alternative to fossil-based material for Plastech SA. This innovation adds value to two waste streams: sawdust, a byproduct of the sawmilling industry and recycled polypropylene.

Using melt extrusion techniques, researchers produced biocomposite pellets suitable for injection moulding and the manufacture of low-cost building materials with a reduced carbon footprint and improved performance.

One of the final products developed is a biobased bottle cap designed to replace conventional fossil-fuel bottle caps. The technology is ready for adoption by local biocomposite pellet manufacturing industries.

The CSIR will enter into a manufacturing agreement to supply Plastech SA with pellets used for moulding bottle caps and other products, such as storage crates.

CSIR-developed biocomposite material (right) from waste sawdust (left) and recycled plastics.

A CSIR-developed biobased bottle cap, an alternative to conventional fossil-fuel bottle caps.

02

Improve the competitiveness of high-impact industries to support South Africa's re-industrialisation by collaboratively developing, localising and implementing technology

Richmore Dondofema (left) and his team from the CSIR piloted a new farm-to-fork app on Mologadi Madisha's farm to identify day-to-day farm management and logistical activities that could be enhanced using the technology.

A NEW FARM-TO-FORK APP FOR EMERGING POULTRY FARMERS

The CSIR has developed a blockchain-based platform that integrates emerging and small-scale farmers into commercial supply chains. It supports an ecosystem of players within the supply network and has been piloted for poultry farmers in Limpopo. The application (app) enhances farm management practices by allowing farmers to capture and monitor feeding and vaccination schedules, temperature and humidity, mortality rates, sales and other poultry production activities.

Small-scale farmers in rural areas face significant challenges, including limited access to markets, raw material stockouts, limited agricultural technology and knowledge, as well as price fluctuations. To address these challenges, the CSIR applied its expertise in logistics and blockchain technology to develop a platform that links emerging farmers with other stakeholders, including commercial markets. Currently available as an Android app, the platform is tailored to the needs of South African small-scale farmers and can be adapted for use across various supply chains, including poultry, cattle and fresh produce.

To ensure its practicality, the CSIR team piloted the app on a poultry farm in Limpopo, gaining valuable insights into the operational needs of small-scale farms. The platform has multiple functionalities, with its core feature enabling farmers to track production from farm to consumer. Additionally, the app serves as a guide, supporting farmers through various stages of the farming value chain. It also facilitates data sharing with decision-makers, providing insights into farming activities and supply chain performance.

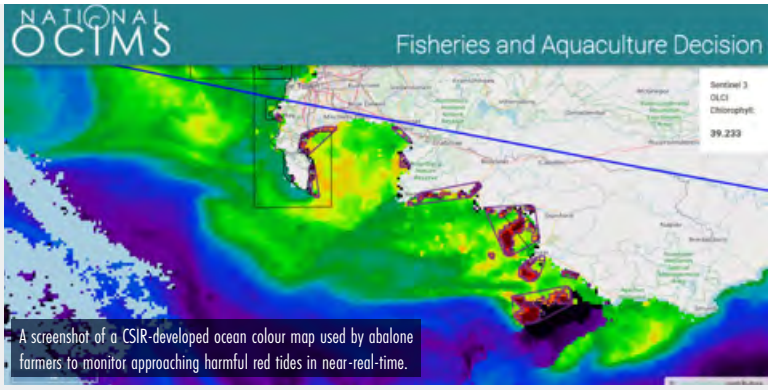
The ILIMA platform is co-funded by the CSIR, with support from the Department of Science, Technology and Innovation (DSTI) South African National Blockchain Alliance programme and the DSTI Foundational Digital Capabilities Research funding programme.

SATELLITE OCEAN COLOUR MAPS WARN ABALONE FARMERS OF HARMFUL ALGAE

Abalone farmers along South Africa's coast are now using ocean colour maps to track marine algal blooms that could harm their export molluscs. CSIR scientists have developed ocean colour and temperature indicators from satellite data, easily accessible through an online tool, as part of the country's ocean economy plan to boost aquaculture jobs.

One of the companies benefitting from the Fisheries and Aquaculture Decision Support Tool of the National Oceans and Coastal Information Management System is Abagold, with its 400 staff tending to about 15 million abalone at its aquaculture facility in Hermanus in the Western Cape. In 2017, an algal bloom caused mortalities of about 40% when millions of farmed abalone in the Walker Bay area were killed as phytoplankton numbers got out of hand during a harmful toxin-producing red tide. Red tides are not new and companies routinely check for signs of harmful algae in incoming seawater. However, with the use of ocean colour maps produced from satellite data, the algal blooms can be tracked before they reach an aquaculture facility. The tool interprets ocean colour and temperature data from the Copernicus Sentinel-3 polar-orbiting satellite constellation.

The aquaculture industry is integrated into communities along the coast, driving local economies. The tool can help safeguard jobs, particularly in the context of the climate crisis, where frequent and intense environmental hazards like marine heatwaves could worsen red tides.



A screenshot of a CSIR-developed ocean colour map used by abalone farmers to monitor approaching harmful red tides in near-real-time.


Above and below: Abalones are sensitive to toxins produced by harmful blooms during red tides.


A worker at Abagold, one of the abalone farms on South Africa's West Coast that now relies on satellite ocean colour maps to warn against approaching harmful algal blooms.

02

Improve the competitiveness of high-impact industries to support South Africa's re-industrialisation by collaboratively developing, localising and implementing technology

Differences in crop health depicted across a field.

EARLY ADOPTERS SIGN UP FOR PRECISION AGRICULTURE INFORMATION

Early adopters of a CSIR-developed precision agriculture information system have signed use agreements and completed training on the platform. These new users include the South African Grain Association and the Eastern Cape Development Corporation. Discussions with potential licensees of the system, which delivers near-real-time insights into crop and soil health, are also underway.

The platform is positioning large-scale and emerging farmers to thrive in an evolving, data-driven agricultural landscape. South Africa's food production must keep pace with population growth and withstand the impacts of climate change.

By integrating satellite imagery with in-situ observations, the system supports informed decision-making, improved productivity and enhanced climate resilience, in line with South Africa's broader fourth industrial revolution strategy in agriculture.

It enables farmers to monitor field-level variability by providing detailed information on soil conditions, such as organic matter, nitrogen, clay content, moisture and pH, as well as indicators of crop health, such as canopy cover, chlorophyll content and leaf moisture. These insights enable early detection of threats such as poor crop emergence, weed infestations, nutrient deficiencies and disease outbreaks, well before they impact yields. Additionally, the system offers predictive yield estimates up to two months ahead of harvest, supporting proactive farm management.

SUSTAINABLE PROTEIN FROM AFRICA

The CSIR has developed a sustainable bioprocess to manufacture a fungal-based protein product for a South African biotechnology company called MycoSure.

The starting material for the mycoprotein is *Fusarium venenatum*, a fungus known for its high protein content. The CSIR developed a production process to make this protein in a bioreactor, offering several sustainability and cost advantages over livestock and crop-based protein production. This is the first time that this specific fungal protein production is being applied in Africa.

MycoSure will use the technology to produce and export mycoprotein products for a variety of applications. Mycelium-based protein or mycoprotein is a highly versatile ingredient with a high-quality nutritional profile. It can be used in analogue meats and dairy, baked goods, health bars, protein shakes, high-end pet foods, as well as vegan and vegetarian products.

Bioprocessing is a sustainable production method because it uses locally available raw materials or by-products from other industries. It can also be optimised to reduce water and energy consumption.

The work is undertaken at the CSIR Biomanufacturing Industry Development Centre and is funded by the Department of Science, Technology and Innovation and the Technology Innovation Agency, as part of a broader initiative to support local biomanufacturing businesses.

Inspecting the quality of dried mycoprotein.

CSIR researcher Cebeni Langa oversees the production of mycoprotein.

The CSIR's Dr Ghaneshree Moonsamy and Yrielle Roets-Dlamini analyse a microscopic view of the fungal mycelium.

The plant-based mycoprotein powder as a final product after drying and milling.

02

Improve the competitiveness of high-impact industries to support South Africa's re-industrialisation by collaboratively developing, localising and implementing technology

SMMEs receive market-ready infused products and a product information file that contains laboratory test results and standard operating procedures.
(From left) Jennifer Badane (Jo-Anne Herbs Farm, Limpopo), Thabo Madliwa (Umya weMpuma, Eastern Cape), Thobekile Zulu (Reapile Africa, KwaZulu-Natal) and Kylie Adams (Shanti Natural Care, Western Cape).

CANNABIS PRODUCTS DEVELOPED AND TESTED FOR SMALL BUSINESSES

To date, the CSIR has supported 23 small, micro and medium enterprises (SMMEs) in developing and marketing high-quality, regulatory-compliant, safe, efficacious and affordable cannabis products for local and international markets.

In 2019, the South African Cabinet recognised the need for a national strategy to commercialise cannabis to increase economic growth, create jobs and alleviate poverty. The resulting National Cannabis Master Plan highlights the sector's significant potential to foster SMME development, attract domestic and foreign investment and add value through the processing and manufacturing of products for local and export markets.

The CSIR's cannabis programme is supported by the Department of Science, Technology and Innovation; the Gauteng Department of Agriculture, Rural Development and the Environment and the Department of Small Business Development. The CSIR's agroprocessing facilities are equipped with supercritical carbon dioxide extraction equipment for cannabis processing, while prototype development is carried out in its laboratories.

Over 40 cannabidiol (CBD)-infused and cannabis-based prototypes have been developed, including nutraceuticals, cosmeceuticals and herbal remedies. Commercial-scale products such as CBD gummies, oil drops, sodas, water, hair oils, pain relief creams, shower gels, face washes and face oils have been transferred to SMMEs for market entry. SMMEs that have benefited from the various incubation programmes include Broccoli Sweets, Yellow Rice and Pops Soda, Mimmie Trading, JoAnne Herbs Farm, Umya we Mpuma, Shanti Natural Care, Mo'canna, Reapile and Higher Ground.

CBD-infused products – developed, tested and produced at commercial scale for trade in formal markets.

GREEN WAYS TO PRODUCE CANNABINOIDS

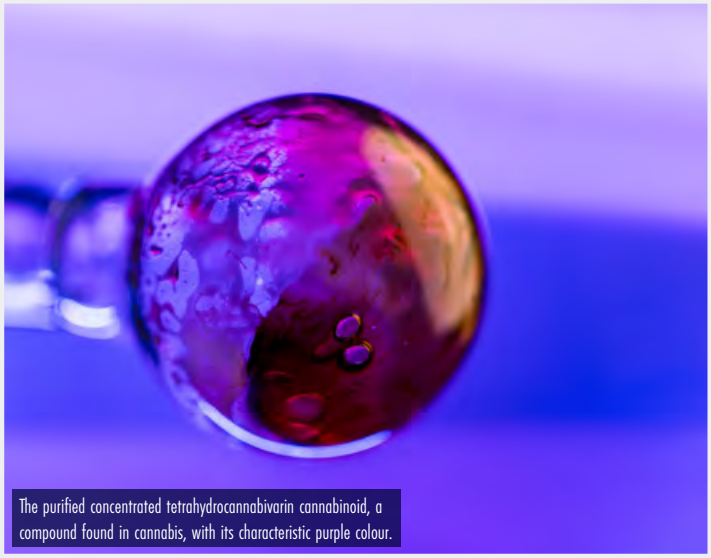
The CSIR has filed a provisional patent in South Africa for a green chemistry approach to produce tetrahydrocannabivarin (THCV) and other tricyclic cannabinoids.

THCV was previously developed as a molecule with medical potential. While researchers also investigated a biocatalytic approach using enzymes sourced from microorganisms, an eco-friendly chemical method using the mineral zeolite proved more commercially viable in this case.

THCV, a non-psychoactive cannabinoid derived from cannabis, has shown potential in the treatment of diabetes, panic attacks, Alzheimer's disease and osteoporosis. The other tricyclic cannabinoids also offer various medical benefits.

CSIR researchers successfully catalysed the production of THCV using an inexpensive mineral called zeolite. More than 10 g of the material was produced at approximately 85% purity. A disclosure of invention was done and will be followed by filing of a Patent Cooperation Treaty.

Although a biocatalytic production route using enzymes from microorganisms was also investigated, the green chemistry method proved more economical in this case. Flow biocatalysis will be investigated to improve the techno-economics of the biocatalysis route.



The purified concentrated tetrahydrocannabivarin cannabinoid, a compound found in cannabis, with its characteristic purple colour.

CSIR senior researcher Dr Chris van der Westhuyzen examining a sample during flow-through conversion.

A mixture of starting material and product during flow-through chemical conversion.

CIRCULAR INNOVATION GAINS MOMENTUM

The CSIR, through its hosting of Circular Innovation South Africa (CISA), is driving the strategic direction and investment in circular economy science, technology and innovation on behalf of the Department of Science, Technology and Innovation (DSTI). Some highlights of this facilitating and catalytic role are outlined below.

Urban farm one of eight Circular Demonstration Fund projects

The CSIR-hosted CISA programme is funding the conversion of a one-hectare abandoned piece of land in Potsdam, Western Cape, into a circular economy urban farm and learning hub.

This project is supported by South Africa's Circular Economy Demonstration Fund and is being implemented by Stellenbosch University in partnership with the City of Cape Town and ICLEI Africa, an association of cities and subnational governments dedicated to sustainable development. The fund is administered by CISA on behalf of the DSTI.

The farm will feature agrivoltaics, hydroponics, vertical gardens, a seedling nursery and zero-till agriculture. It will also test local community-based solutions for organic waste treatment. The project aims to demonstrate how large volumes of organic waste produced in cities can be managed, improve urban food security and regenerate open spaces that are often misused. The public will be able to visit the farm to explore and receive training on its sustainable urban farming technologies.

Over the past financial year, the site has been secured, a black soldier fly service provider has begun installing a modular facility and two farmers along with a site manager have been appointed.

Officials from the City of Cape Town and researchers explored some of the technologies to be installed on-site during a soft launch of the farm in November 2024. The project is one of eight Circular Economy Demonstration Fund grants intended to bring the national system of innovation, including universities and science councils, closer to the private sector. The aim is to de-risk, demonstrate and scale circular interventions.

Sonke Retail (Pty) Ltd. and the CSIR team at a new installation of Sonke's cooking oil refill station at a grocery store. From left, Carla Beetge and Carike Karsten (CSIR), David Monametsi and Elias Maake (Sonke) and Paul Burger (CSIR).

Three CSIR-led circular economy science projects

The CSIR has been awarded three additional projects under the Circular Economy Demonstration Fund. The first project involves the installation of automated refill stations for fast-moving consumer goods in low-income environments. In partnership with Sonke Retail (Pty) Ltd., the CSIR has installed cooking oil refill stations at grocery stores. Consumers pay a flat rate per litre and can dispense the oil into their own containers. The CSIR supports the initiative by analysing consumer refill data collected by the machines. This initiative reduces single-use packaging waste and improves affordability.

The second project is a field demonstration in the Eastern Cape, where pineapple farmers are trialling a new biodegradable mulch film developed by the CSIR. This film offers an environmentally friendly alternative to conventional plastic soil covers.

The third project, based in KwaZulu-Natal, focuses on the development of an interlocking building block made from recovered construction and demolition waste and glass. The blocks reduce the need for virgin materials such as river sand, stone and water. Designed to interlock like LEGO® blocks, they require minimal mortar or cement, allowing for easy disassembly and reuse in future builds.

CSIR-developed biodegradable mulch film is being trialled on a pineapple farm in Bathurst in the Eastern Cape.

Waste material from the construction sector can now be used in an innovative green building block (top), as displayed in this newly built demonstration house.

Circular innovation for agriculture, manufacturing, minerals and metals

During 2024 and early 2025, CISA launched the South African Circular Minerals and Metals, Circular Agriculture and Circular Manufacturing Initiatives. These three initiatives align with the DSTI's White Paper and 10-year Decadal Plan to modernise the mining, agriculture and manufacturing sectors, and explore how these priority economic sectors interface with the circular economy.

While CISA is responsible for project managing all three initiatives, the minerals, metals and manufacturing initiatives are implemented by CSIR-hosted programmes, namely the Mandela Mining Precinct and the National Cleaner Production Centre, South Africa. The agriculture initiative is led by the University of the Free State.

Circular innovation for human settlements and mobility

In February 2025, the CSIR finalised two technical reports aimed at understanding the circular economy opportunities in human settlements and mobility. These reports form part of a full suite of reports that frame the circular economy opportunities across South Africa's resource-intensive sectors. Previous reports covered mining, agriculture, manufacturing, energy and water.

Funded by the DSTI and undertaken by the CSIR, these studies aim to support South Africa's transition to a more resilient, low-carbon and circular economy. The full set of reports is available at: https://www.circulareconomy.co.za/csir/.

In the mobility sector, researchers identified the need for a comprehensive sector skills development strategy to reskill workers for future jobs, along with a clear need for increased investment in rail infrastructure.

For human settlements, interventions such as greywater recycling, rainwater harvesting and urban agriculture were identified as key strategies to develop circular systems that reduce resource inefficiencies and waste.

Together, the reports suggest that transitioning to a more circular economy holds significant potential to unlock value across all sectors of the South African economy.

LOCAL COMPANIES GIVEN WINGS WITH HIGH-TECH MANUFACTURING SUPPORT

The Aerospace Industry Support Initiative (AISI), established by the Department of Trade, Industry and Competition and hosted by the CSIR, aims to foster industrial development and enhance the competitiveness of local high-technology manufacturing. Each year, it supports around 40 beneficiaries. While initially focused on advanced manufacturing in the aerospace and defence sectors, the initiative has since expanded its reach to include renewable energy, metals and fabrication, health products and the marine sector.

Welding certification opens new market for local marine engineering company

Rizik Link, a South African black-owned marine engineering company, achieved welding certification from the International Association of Classification Societies (IACS) through the support of the Sector-wide Accreditation Programme of AISI.

Rizik Link performs steel fabrication, piping and specialised welding services, such as repairs on decks, boilers, pipes and other components of vessels up to supertanker size.

Increasingly sophisticated metals and materials are being used in vessel design, requiring an evolution in repair services in this highly regulated sector. In addition, older vessels need to be upgraded, especially to comply with environmental performance expectations.

Ship repairers such as Rizik Link follow a welder's guide that includes applicable code requirements and production standards. It controls welding process components such as base metal grade, amps, volts and travel speed among other requirements. Controlling the welding process is critical, as the mechanical properties of a weld cannot be verified after welding.

IACS drives regulation through technical support, compliance verification and research and development. More than 90% of the world's cargo carrying tonnage is covered by standards set by its 11 member societies.

Through AISI support, Rizik Link gained IACS welding certification for the core processes it conducts. Technical experts reviewed, specified and documented welding procedures and quality standards; helped procure equipment and hosted training workshops. Technical teams submitted welding samples to standards-approved laboratories for testing and welders were certified.

Compliance with IACS certification opens the door for Rizik Link to enter new markets. The development of local capabilities not only creates new jobs but also attracts more maritime operators to South African ports for service and dry docking, offering further benefits to the local industry.

The welding process undergoes qualification to ensure that welding operators are maintaining the same, required standards and codes. Rizik Link, a marine engineering company, achieved certification from the International Association of Classification Societies.

Position welding performed on piping for a vessel.

New commercial drone raises the bar

The combined capabilities of three local technology companies, supported by AISI, led to the industrialisation of a small, fixed-wing commercial drone designed for surveillance, mapping, conservation and inspection tasks. The Elevation UAV offers greater endurance than multirotor drones and is more affordable than international alternatives. The project was supported under the Industry Development and Technology Support Programme of AISI.

This new UAV marks a shift away from traditional moulded composite construction – using hand-made glass and carbon fibre – to a hybrid composite and expanded polypropylene construction method. This approach is ideal for large production runs and results in a lightweight product.

The project also involved replacing sub-optimal commercial off-the-shelf omnidirectional datalink antennas with conformal antennas that are embedded and form part of the hybrid fuselage construction introduced in a previous project. These conformal antennas reduce drag and increase overall performance.

The tail construction process for the Elevation UAV was improved, moving from a time-consuming composite sandwich method to a novel machined or injection-mould core covered in a composite shell with integral control surfaces.

Three companies contributed to the project: overall project lead Avior Labs; airframe manufacturer Lightweight Structures and LambdaG, an antenna expert responsible for the embedded antenna design and manufacture.

The trio of technology companies is now well-positioned to benefit from the growing demand for hybrid vertical take-off and landing UAVs, which offer greater endurance and require minimal space for take-off and landing.

Pictured with an Elevation drone, (from left) Kreelan Padayachee, technical director and flight controls specialist, and Dr Bennie Broughton, managing director and aerodynamicist.

A local company now produces longer length plastic nuts and bolts for the growing floating photovoltaic systems sector.

Local company introduces plastic bolts for floating solar installations to its product line

Gauteng-based company Feasible Plastics is now positioned to target international markets where there is growing demand for floating solar installations – particularly those using environmentally friendly parts. The company was approached by a client seeking custom-designed fasteners to securely attach solar panels to floating platforms. Funding support from AISI enabled Feasible Plastics to acquire the necessary tooling and qualify the manufacturing process for producing plastic bolts and nuts.

The parts were manufactured using injection moulding – a production process that minimises material waste, optimises energy use and ensures long-term durability. The CSIR participated in the tool design review to identify potential failure points and improve the overall design.

Floating solar installations are gaining popularity as they make use of otherwise unused water bodies – especially valuable in densely populated areas. This technology intervention has equipped Feasible Plastics to compete in a growing new market.

LOCALISATION AND PRODUCTION SUPPORT FOR MANUFACTURERS

CSIR-hosted programmes supported manufacturers to efficiently produce parts locally.

Certified valves and pumps for power plants now made locally

South Africa no longer needs to import certain valves and pumps used in power plants and other sectors. The CSIR-hosted Technology Localisation Implementation Unit (TLIU) supported original equipment manufacturers (OEMs) in developing these components locally, in accordance with strict safety and manufacturing standards.

This development was carried out in partnership with Eskom's Koeberg Nuclear Power Plant and Électricité de France (EDF), with the aim of promoting local manufacturing and export opportunities, boosting infrastructure development and revitalising the country's industrial base. In accordance with regulations issued by the Department of Trade, Industry and Competition, Eskom is required to procure from local suppliers.

The OEMs source their castings from local foundries. However, South Africa previously had only one foundry certified under the Pressure Equipment Directive (PED) (2014/68/EU), and it had ceased operations. To address this gap, the CSIR-hosted National Foundry Technology Network (NFTN) assisted local foundries in obtaining the necessary PED certification.

The intervention supports the localisation directive of the national Steel Master Plan because these foundries can now supply suitably certified capital equipment to the energy, mining, chemicals, water infrastructure, oil and gas sectors.

With the new PED-certified castings from local foundries, two valve manufacturers – Mitech Control Valves (Pty) Ltd. (which produces control valves) and AZ-Armaturen (Pty) Ltd. (which produces plug valves) – designed, manufactured and tested the valves, which were delivered and commissioned at the Koeberg plant under the guidance of EDF.

Another local manufacturer, KSB Pumps, designed and manufactured a pump, which was also installed and commissioned at the plant.

The three local OEMs will also be integrated into EDF's global supply chain.

Automotive foundries benchmarked

The CSIR-hosted NFTN conducted a benchmarking study to compare the performance of South African automotive foundries with their local and international counterparts.

The objective was to identify gaps, opportunities for improvement and industry performance standards by examining competitors' products, processes, energy management practices, technologies and innovations.

The study measured these indicators against the national Automotive Master Plan, which informs strategic decisions by the sector, policymakers and original equipment manufacturers. The report was finalised in March 2025 and will be shared with the industry.

Streamlining local companies' operations

Since 2012, the TLIU has assisted several South African manufacturers in producing items such as circuit boards, power cables, locomotive parts, electrical load limit meter boxes and container skips.

The companies received assistance – where needed – with software acquisition and training, prototype development, regulatory compliance, business automation, manufacturing process improvements, product testing and quality management certifications.

Several companies reported winning new contracts and hiring new staff following these interventions. Eastern Cape container skip manufacturers Gehring Engineering (Pty) Ltd offered one-year contracts to eight youth candidates, while Gauteng-based Zwonaka Engineering (Pty) Ltd, which helps water boards protect underground metallic infrastructures, hired 26 new part-time employees. Harness Pro secured two new contracts for wiring harnesses following digitisation and lean manufacturing interventions by the TLIU, and Nertel (Pty) Ltd. secured a new power cable supply contract.

Other companies that benefited include:

- Khanyi Ngco Solutions;
- iLED Manufacturing (Gauteng);
- Halcast (Pty) Ltd (KwaZulu-Natal);
- Chopper Technologies (Pty) Ltd (KwaZulu-Natal);
- LHL Engineering (Pty) Ltd (KwaZulu-Natal); and
- Spearpoint Engineering (Mpumalanga).

Castings at Alcutech, a local foundry, improved after the NFTN helped the company optimise its layout. The intervention will reduce energy costs by about 20%, as well as improve the productivity and efficiency of the black woman-owned foundry.

Black woman-owned foundry now green and lean

The NFTN helped local aluminum caster Alcutech reduce its energy costs by about 20%, as well as improve its productivity and efficiency, leading to a competitive foundry with environmental compliance.

The NFTN works with foundries to enhance sustainability, localisation, skills development and research and development to ensure their preservation for manufacturing and reindustrialisation, especially in areas like automotive, infrastructure and capital equipment in South Africa.

Alcutech is a sand and gravity jobbing foundry, first established in 1999. It supplies aluminium castings to the mining, agriculture, rail and power generation sectors, but faced closure due to operational challenges.

The NFTN assessed gaps in the foundry's processes, productivity, resources, efficiencies, technological requirements and capital expenditure needs, and identified opportunities for technical compliance. This led to layout optimisation, which increased efficiency and improved resource usage.

The interventions have resulted in improved operational efficiency, productivity, energy consumption and cost savings. They also enabled youth job creation through the Department of Science, Technology and Innovation's engineering internship programme, as well as the retention of the foundry's existing employees.

By becoming environmentally compliant, Alcutech is now also a responsible and sustainable player in the industry, with access to new markets.

NEW MINE SAFETY TRAINING AT TAILINGS FACILITIES

The CSIR is implementing an immersive training solution focused on safe work practices at tailings storage facilities for a leading mining service provider. The solution incorporates virtual reality (VR) technology, among other tools, to improve mine worker safety through immersive, experiential training in hazardous scenarios.

A CSIR training specialist demonstrates the use of VR technology in a training session.

The South African mining industry has committed to a zero-harm-goal, aimed at ensuring that all mine workers remain safe at all times. The CSIR's multi-modal training approach equips mine workers to respond adequately to emergencies within the context of specific mining operations. The training solution will be commissioned at the client's operational and training facility.

The near-real experience offered by the VR-enhanced training modules modernises mine safety training, increases training efficiency and improves overall safety performance. The training can be customised to specific hazardous environments and is suitable for onboarding new employees, as well as providing refresher courses for existing employees working in high-risk areas.

INNOVATION FUND FUELS TECH STARTUPS

Between 2020 and 2024, South Africa's Innovation Fund supported 96 high-tech startups and strategic innovation programmes.

Within this period, the fund has disbursed over R900 million, resulting in the creation of 802 jobs and driving sectoral growth across key industries, including information and communications technology, health, manufacturing, agriculture and transportation.

The Innovation Fund is a public-private partnership between the Department of Science, Technology and Innovation (DSTI), the Technology Innovation Agency, the South African SME Fund and the Public Investment Corporation. It provides early-stage capital to de-risk new ventures and fosters venture capital participation.

The fund can be accessed on the Innovation Bridge Portal, a digital platform hosted by the CSIR, which links innovators, investors, funders, entrepreneurs, policymakers and other stakeholders within South Africa's innovation ecosystem. It also facilitates access to funding, licensing opportunities, market insights and co-development partnerships.

The Innovation Bridge Portal itself forms part of the Technology Utilisation Initiative, a CSIR-hosted programme established to support the DSTI's policy instruments. It is also supported by the Department of Small Business Development and has established strategic partnerships with the World Bank Group, the European Union, the National Intellectual Property Management Office and the Companies and Intellectual Property Commission.

In 2024, the portal reached 9 935 users – an increase of 220% since 2021. It also ran 44 digital campaigns to boost engagement and shared more than 450 events and resources.

Recent initiatives shared on the Innovation Bridge Portal, such as the Corporate Innovation Challenge, AgTech Challenge and FinTech Challenge have enhanced investment readiness, market access and business development for emerging ventures.

UPGRADED SMALL-WAVE MEASUREMENT TECHNOLOGY DEBUTS FOR WATERFRONT DEVELOPMENT

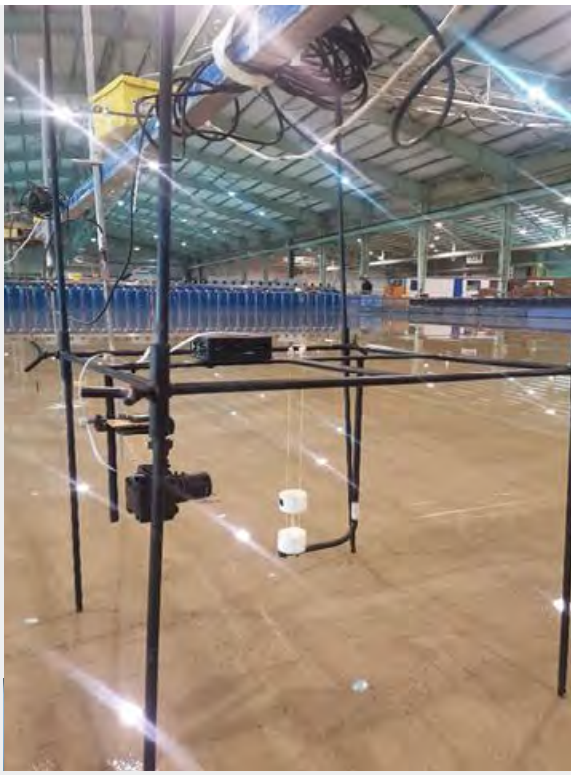
The CSIR deployed a new version of its small-wave measurement system to verify wave heights for a new development project for V&A Waterfront Holdings (Pty) Ltd in Cape Town.

Originally introduced over two decades ago, the Keofloat System transformed the measurement of small wave heights in hydraulic model basins. It was widely used for harbour model wave condition studies and model ship motion analysis.

The upgraded Keofloat System retains the original wave measurement principles while incorporating modern, easily obtainable hardware and user-friendly software. Designed to measure model-scale waves smaller than 10 mm, the system overcomes the signal noise issues commonly associated with traditional resistance and capacitance wave gauges. It utilises lightweight polystyrene cylinders, known as keofloats, which move with passing waves. These movements are tracked by a camera to ensure precise measurement.

The upgraded system offers significant improvements in usability, including simplified setup, deployment and post-data analysis. The outputs are easy to interpret and the use of inexpensive, replaceable components enables easier maintenance. Its scalability also allows for simultaneous measurements across multiple models.

The update reintroduces the Keofloat System as a reliable and advanced solution for model wave studies conducted by the CSIR.



The CSIR deployed a new version of its small-wave measurement system (top) at its coastal engineering and port infrastructure modelling facility, where researchers verified wave heights for a new development project for V&A Waterfront Holdings (Pty) Ltd in Cape Town.

02

Improve the competitiveness of high-impact industries to support South Africa's re-industrialisation by collaboratively developing, localising and implementing technology

A youth-led team based in Tshwane, Gauteng, devised an automatic medication dispenser for the elderly (above) with design and funding support from the CSIR-hosted and DSTI-funded RISP. Farmru Smart AgriTech (right), an innovation aimed at improving resource efficiency for smallholder farmers, was supported by RISP in Limpopo by providing training, market access and prototype development.

SUPPORT FOR TECH INNOVATORS IN TOWNSHIPS AND RURAL AREAS

The DSTI-funded Regional Innovation Support Programme (RISP), hosted by the CSIR, supported over 500 small, medium and micro enterprises (SMMEs) during the last financial year. This support led to several innovations, including a smart farming application (app) and an automatic pill-dispensing device.

RISP strengthens South Africa's innovation ecosystem by targeting underserved townships and rural areas. Through its Regional Innovation Networking Platforms, the programme facilitates collaboration among key regional stakeholders – government, industry, research institutions, civil society and technology-focused SMMEs – to address local development priorities through innovation.

These platforms provide structured support for entrepreneurs, including feasibility studies, business planning and access to innovation services from ideation to prototyping. RISP also contributes to infrastructure planning for long-term innovation capacity, such as the development of science parks and incubators.

Entrepreneurs in fields such as additive manufacturing, cybersecurity and app development received training. Provincial innovation challenges and hackathons incentivised youth-led solutions in sectors such as healthcare, agriculture and public safety, with top ideas receiving funding and development support.

Notable success stories include Farmru Smart AgriTech, an innovation aimed at improving resource efficiency for smallholder farmers. RISP supported the project in Limpopo by providing training, market access and prototype development. Another innovation is an automatic medication dispenser for the elderly, designed and funded with RISP support by a youth-led team based in Tshwane, Gauteng.

These mentorship programmes play a key role in integrating marginalised innovators into the National System of Innovation, ensuring that grassroots solutions contribute meaningfully to inclusive economic growth.

DURABILITY OF RUBBER COMPONENTS AT KOEBERG TESTED

The lifespan of key rubber components and bearings at Eskom's Koeberg Nuclear Power Station has been extended by another 20 years, thanks to testing conducted by the CSIR.

The CSIR analysed the durability of aseismic neoprene rubber samples and anti-seismic bearings under conditions of wear and tear in collaboration with mechanical engineering firm Investmech (Pty) Ltd. and Nuvia Structures, an international company responsible for routine bearing testing at the Cruas Nuclear Power Plant in France.

The testing involved ageing and dynamic mechanical thermal analysis, supported by dynamic and static shear modulus test. The tests were conducted to address concerns raised by the National Nuclear Regulator (NNR) in July 2024 regarding previous shear modulus test results.

The outcome of the work has contributed to a decision by the NNR to grant Unit One of the power station a license to continue operations for the next 20 years.

Tensile testing to determine the strength, stiffness and elongation of the rubber.

Dynamic mechanical thermal analysis determines the storage modulus and loss modulus of the rubber when subjected to distortion as a result of shear deformation.

CSIR experts in polymer composites, from left, Osei Ofosu, Rhandzu Rikhotso-Mbungela, Lesego Temane and Rakgoshi Lekalakala.

LASER BEAM WELDING TECHNOLOGY FOR REPAIRS TO ESKOM POWER GENERATION EQUIPMENT

The CSIR has drawn on its laser beam welding capabilities to repair an intermediate pressure turbine shaft at Eskom's Tutuka power station, along with completing laser repairs at several other Eskom stations. This follows the long-standing collaboration between the CSIR and Eskom's Research, Testing and Development department.

The refurbishment used a process known as laser cladding, in which metal is deposited and welded onto the exact position of the worn component. Lasers are particularly well suited to this method due to their low heat input, high speed and the precision enabled by a robotically controlled arm. Accuracy is critical in this context to prevent distortion and ensure that components fit seamlessly into the turbine.

A particular challenge arose from the fact that the blade configuration of the intermediate pressure shaft differs from that of a low-pressure shaft. As a result, additional welding procedures had to be qualified to meet the strict material property specifications for pressure rotors. The work on this turbine shaft also included refurbishment of the shaft journals and a thrust collar section.

The CSIR team also conducted laser repairs on components at other Eskom stations, including a boiler feed pump turbine at Arnot, hydrogen seal areas at Hendrina and intermediate pressure gland box landing areas at Matimba and Matla power stations.

Material is added to the surface of components and fused by a laser beam, creating a bonded additional layer to repair or rebuild it to its original state. The mining, aviation, chemical processing and other heavy-parts industries have become reliant on laser cladding and hardening.

TOOLS FOR A CLEAN ENERGY ECONOMY

The CSIR continues to provide scientific support to government decision-making aimed at advancing the green hydrogen economy and expanding wind and solar energy in a responsible manner.

Green hydrogen refers to hydrogen fuel produced using renewable energy. The general term for energy products generated using renewable power sources is Power-to-X (PtX).

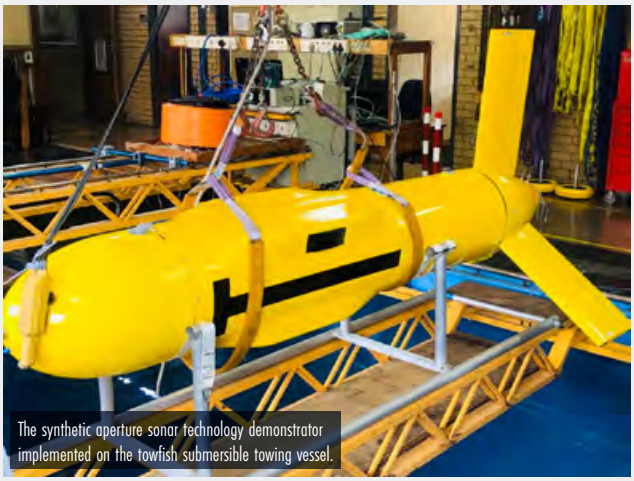
The CSIR and its partners completed an Offshore Wind Roadmap for South Africa, the South African Green Hydrogen Potential Atlas and an environmental impact assessment (EIA) guideline for green hydrogen and other PtX products.

Researchers found that offshore wind energy could supply South Africa with up to 40 gigawatts of power and create approximately 15 000 jobs by 2050 in a high-growth scenario. While the entire offshore area has potential for wind energy generation, the study identified the west coast as particularly suitable to initiate offshore wind energy generation projects. The report will be released in the second half of 2025.

Regarding green hydrogen tools, authorities and developers now have free access to the online atlas that pinpoints ideal locations for green hydrogen industries in South Africa. Additionally, the EIA guideline will help ensure that new projects are environmentally and socially responsible.

These tools will help accelerate the development of green hydrogen and other PtX products, while supporting the spatial planning of renewable energy developments.

CSIR senior researcher Luanita Snyman-van der Walt is one of the key contributors to two planning tools to support South Africa's transition to a green hydrogen economy. The new atlas can assist in identifying spatial prospects and constraints for green hydrogen development based on a multi-criteria analysis, while the guidelines provide practical guidance for environmental impact assessments related to green hydrogen projects in South Africa.


The synthetic aperture sonar technology demonstrator implemented on the towfish submersible towing vessel.

NEW SONAR TECHNOLOGIES TO NAVIGATE UNDERWATER

A CSIR-developed sonar demonstrator has been installed into a new towfish as part of efforts to ensure that the South African Navy benefits from technological advancements that enhance safe underwater operations. The towfish supports rapid deployment and testing in real-world aquatic environments.

The synthetic aperture sonar demonstrator captures high-resolution acoustic images of the seafloor. The South African Navy uses different sonar systems, such as multibeam and side-scan sonars, to navigate and detect underwater threats. These systems support obstacle avoidance, underwater reconnaissance and mine detection. They rely on advanced hardware and software and require extensive expertise for operation, maintenance and platform upgrades.

The CSIR has improved the sonar system by developing proprietary acquisition and processing software that leverages high-performance single-board computers equipped with cutting-edge graphics processing unit technology. This enables the rapid processing of sonar data to produce final images in near-real-time. As a result, the CSIR is advancing toward real-time image formation with sonar systems.

Optimal sonar systems are essential for submarines and surface vessels to operate safely and effectively at sea.

FAST, RELIABLE ACOUSTIC UNDERWATER DATA TRANSFER FOR NAVAL OPERATIONS

The CSIR achieved near-perfect transmission and data rates exceeding 240 kbps during a demonstration of the latest version of its broadband underwater data communication system to Armscor at the CSIR's underwater acoustic testing facility.

The CSIR's ongoing research focuses on developing fast and reliable acoustic underwater data transmission. This technology aims to transmit data, such as sonar images, over distances of up to 500 m, enhancing the capabilities of the South African Navy during naval operations.

Researchers implemented multiple-input multiple-output technology, utilising multiple transmitter and receiver transducers to improve the broadband underwater data communication system. This technology provides greater transmission bandwidth, allowing for enhanced signal reliability and increased data rates. In addition to software development, new mechanical and electronic hardware was developed for two buoy-mounted, stand-alone transmitter and receiver systems.

Rapid wireless underwater data transfer is becoming ever more crucial, particularly for autonomous underwater vehicles – modern devices capable of mapping the ocean floor, inspecting underwater structures and ensuring the safety of waterways.

Researchers also explored live video streaming techniques for the system during the demonstration.


Elna Niemann, CSIR lead engineer for the Broadband Underwater Data Communication project, with the technology demonstrator during a tank test at the CSIR's sonar testing facility.

NEXT-GENERATION RADAR TO HELP SAFEGUARD BORDERS AND INFRASTRUCTURE

The CSIR demonstrated its next-generation ground-based surveillance and classification radar to defence clients during two field tests held at the Rietvlei Nature Reserve near Pretoria. The new radar system monitors movement across wide areas, enabling the detection and tracking of intruders so that security forces can be directed for timely interception.

The system utilises the CSIR-developed C-Band phased array technology, providing a flexible, upgradeable architecture without the need to physically steer the radar antenna. It incorporates advanced artificial intelligence for radar-based target classification, allowing it to operate autonomously – automatically discriminating between people and other targets and triggering alerts for tactical response without the need for a human operator.

The Rietvlei deployment and demonstration pave the way for an operational experiment with the armed services in border safeguarding. Porous land borders pose a challenge for defence and security agencies battling poaching, smuggling (of humans, weapons and substances), illegal entry, cattle theft and other illegal activities. The system can aid in this regard, in addition to being applied in wide-area security contexts such as farms, production plants, mines and critical infrastructure or national key points. Being scalable, it can be easily adapted to suit specific applications, depending on requirements for radar detection range and angle measurement accuracy or to align with the available budget.

No hands on deck. The system detects and automatically classifies movement as either animal or human to foil insurgence or criminal activities in protected areas. With fewer components, the system becomes easier to deploy – and hide – at crime hotspots.

WEB-BASED REPORTING TOOL FOR CYBERCRIMES

The CSIR has developed a web-based tool that enables financial and electronic communications service providers to report cybercrimes directly to the South African Police Service (SAPS).

In line with the Cybercrimes Act, 2020 (Act 19 of 2020), a Cybercrimes Designated Point of Contact has been established through a collaboration between the CSIR and SAPS. The facility is located at the CSIR in Pretoria. The Act requires all financial and electronic communications service providers to report cybercrimes directly to this designated point of contact.

As the use of digital systems for communication and online transactions becomes increasingly widespread, so do the risks to the safety and security of user's personal information. Previously, there was no dedicated mechanism or platform to report cybercrimes. In response, the CSIR developed a secure, web-based reporting platform that allows service providers to report cybercrimes directly to the SAPS Designated Point of Contact, hereby supporting cybercrime investigation and response efforts.

The tool has been fully developed over the past two years and is ready for deployment in a live environment. It will undergo final testing, security assessments and penetration testing before being rolled out nationally for use by all financial and electronic communications service providers in South Africa.

CSIR PROVIDES TECHNICAL INPUT TO SHAPE GAUTENG'S TAXI RANKS OF THE FUTURE

As part of efforts to implement standardised, forward-thinking approaches to minibus taxi rank development in Gauteng, the CSIR has completed a policy framework, technical guidelines, a spatial analysis and categorisation of minibus taxi ranks, architectural design standards and a decision support system. This work forms part of the Gauteng Department of Roads and Transport economic hub project, paving the way for modernised intermodal transit facilities.

An integrated and eco-friendly public transport strategy is crucial as Gauteng continues to grow. The CSIR's contribution included a policy framework for developing intermodal transit facilities as economic hubs, along with technical and design guidelines to guide future developments. This entailed two-dimensional and three-dimensional architectural design concepts. A decision support system was also developed to facilitate the identification of suitable locations for future taxi rank development.

Researchers also completed a brownfield concept design for the Vereeniging intermodal facility. This initiative aims to bring Gauteng closer to its vision of integrated public transportation systems that prioritise convenience, address spatial inequalities and stimulate economic development.

3D architectural design of a minibus taxi rank, featuring Type A pedestrian perspective signage, designed to inform and keep pedestrians safe.

SIMULATION MODEL PROVIDES INSIGHTS INTO PUBLIC SERVICE SUPPLY CHAINS

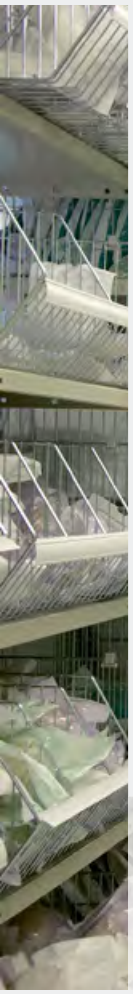
The CSIR has developed an innovative simulation model to optimise warehouse locations for the Gauteng Departments of Health and Education.

By virtually comparing different scenarios, decision-makers in these departments can identify the most promising solution to improve supply chain responsiveness, reduce transportation costs and enhance service delivery. The simulation model enables decision-makers to tailor strategies for their specific supply chains and to evaluate their impact without disrupting existing processes.

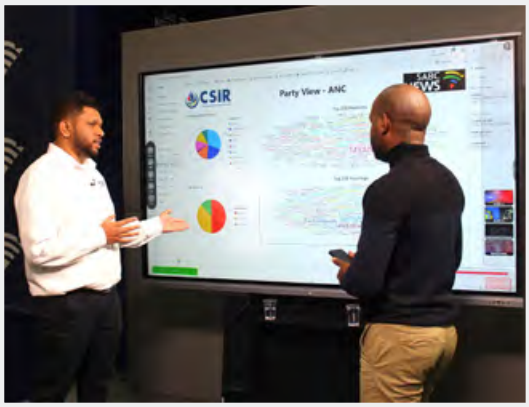
In Tshwane, an analysis for the Gauteng Department of Health recommended a transition to a decentralisation strategy, more specifically, to close the existing warehouses and to acquire two new facilities capable of supplying general and surgical items. Further investigation into cost scenarios is recommended.

For the Gauteng Department of Education, the model evaluated multiple warehouse configurations and identified decentralisation as the optimal strategy. Adding a new warehouse alongside four delivery vehicles – three dedicated to a new facility – could reduce transportation costs and enhance supply chain responsiveness. While decentralisation offers clear logistical benefits, a review of operational costs is recommended before implementation.

This technology has the potential to transform public service supply chains, improve efficiency, reduce costs and strengthen service delivery across Gauteng.



Comparison of district locations placement in (top) Google Maps and (bottom) in the simulation model. Map images verify the correct geographical placement of the districts – a district is represented by a green building in the simulation model (top). Upon closer inspection, each district (green building) has a coloured dot indicating the warehouse (yellow building) that will service its furniture orders.



Team CSIR during the 2024 national and provincial government elections.

The CSIR's predictive model was used to forecast the outcome of the 2024 National and Provincial Government Elections.

CSIR EXCELS IN ELECTION FORECASTING

The CSIR showcased its technological expertise by accurately predicting the outcome of the 2024 National and Provincial Government Elections. Researchers drew on their statistical and mathematical expertise to develop a powerful predictive model.

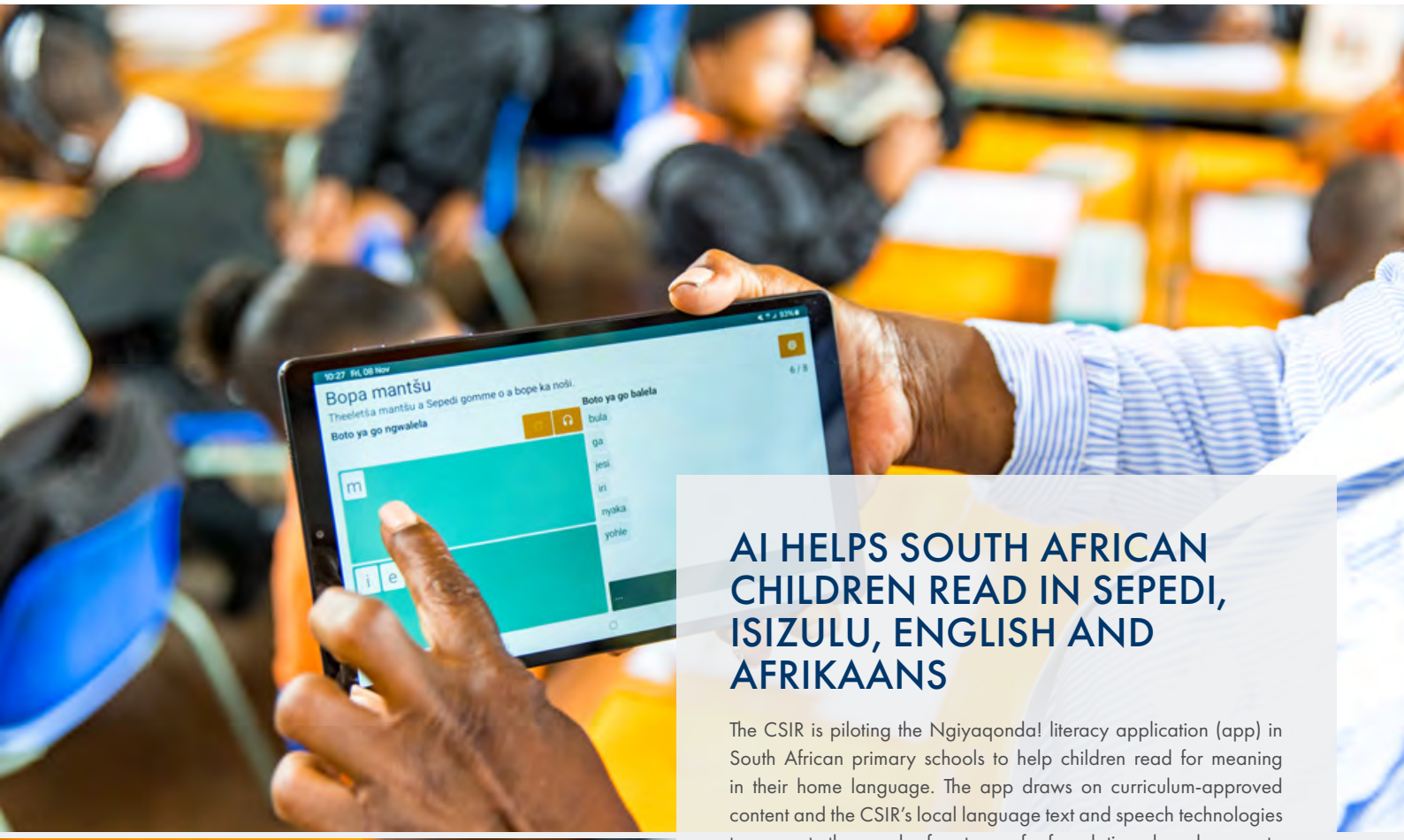
Based on sophisticated digital simulations and extensive datasets, the model achieved remarkable accuracy, with a margin of error of just two percentage points. During the early stages of vote counting, the model forecasted national and provincial results, voter turnout rates and seat distributions within provincial legislatures. With real-time processing capabilities, it swiftly and accurately interpreted incoming data, enhancing the reliability of the projections.

Over the last 10 South African elections – the 1999, 2004, 2009, 2014 and 2019 national elections; as well as the 2000, 2006, 2011, 2016 and 2021 municipal elections – the CSIR has employed a statistical model to predict the election outcomes at various levels of government, namely local, provincial and national.

The CSIR's election prediction model is based on two core principles: the analysis of voter behaviour patterns and the sequence in which voting results are announced on election day. When combined, these principles enable the team to group voters or voting districts based on their past voting behaviour utilising a statistical clustering method.

In previous elections, the model typically achieved a high degree of accuracy at a national level once approximately 5% of the results had been tallied. As more voting districts are counted, the predictions become more stable and accurate.

In addition to contributing to objective reporting during the early phases of the results – when viewers and reporters are empowered to better understand incoming results – the forecasts showcase how statistical clustering and mathematical algorithms can deliver accurate predictions using a relatively small sample of results.



Anges Dhlamini (left), a grade three teacher at Pheladi Nakene Primary School in Mamelodi, Pretoria, gives feedback to CSIR researchers Laurette Marais (centre) and Ilana Wilken (right) during a pilot study of the Ngiyaqonda! literacy app. The app draws on curriculum-approved content and the CSIR's local language text and speech technologies to create thousands of sentences for foundation phase learners to play through.

AI HELPS SOUTH AFRICAN CHILDREN READ IN SEPEDI, ISIZULU, ENGLISH AND AFRIKAANS

The CSIR is piloting the Ngiyaqonda! literacy application (app) in South African primary schools to help children read for meaning in their home language. The app draws on curriculum-approved content and the CSIR's local language text and speech technologies to generate thousands of sentences for foundation phase learners to engage with through interactive play.

In March 2025, the CSIR team celebrated the successful completion of phase one of the Ngiyaqonda! pilot project with the handover of mobile devices to their first isiZulu-speaking pilot school, Ebuhleni Primary School, in Soweto. The app was also piloted with Sepedi-speaking grade three learners at Pheladi Nakene Primary School in Mamelodi and with Afrikaans-speaking learners at Laerskool Die Krans throughout 2023 and 2024.

Low literacy remains a significant challenge in South Africa, with the most recent 2030 Reading Panel report revealing that approximately 80% of grade three learners in the country cannot read for meaning in any language.

The Ngiyaqonda! project is one of several innovative speech, text and generative artificial intelligence solutions developed by the CSIR to address educational challenges in South Africa. The first phase of the project was funded by the Department of Sport, Arts and Culture, using technologies developed in previous research projects funded by the South African Centre for Digital Language Resources.

The CSIR has applied for additional funding to advance to phase two and is seeking private sector partnerships to expand the initiative's reach and impact.

03

Drive socioeconomic transformation through research, development and innovation that supports the development of a capable state

COFIMVABA LEARNERS LOG GREEN SCORES FOR CSIR-DESIGNED SCIENCE CENTRE

South Africa's first net-zero science centre, designed by the CSIR, now serves as an ongoing citizen science initiative in green building practices and a model for future infrastructure.

The Albertina Nontsikelelo Sisulu Science Centre, which first opened in 2020, features innovative construction materials, ventilation systems, solar and wind energy solutions and water supply systems.

Grade 11 and 12 learners from two nearby high schools in Cofimvaba, Eastern Cape, use tablets to monitor the building's thermal performance, while its water and energy efficiencies are tracked through a digital twin.

The CSIR, in partnership with the Department of Science, Technology and Innovation (DSTI) and Eastern Cape authorities, designed and oversaw the centre's construction to demonstrate the feasibility of sustainable buildings. Serving 26 schools in the area, the centre also features exhibitions designed by DSTI entities to encourage learning and promote careers in science and technology.

This citizen science project introduces learners to green building practices and technologies such as digital twinning, preparing them for careers in advanced technologies. At the same time, scientists gain insights into indigenous knowledge from the community and remotely analyse data collected by the learners from Pretoria.

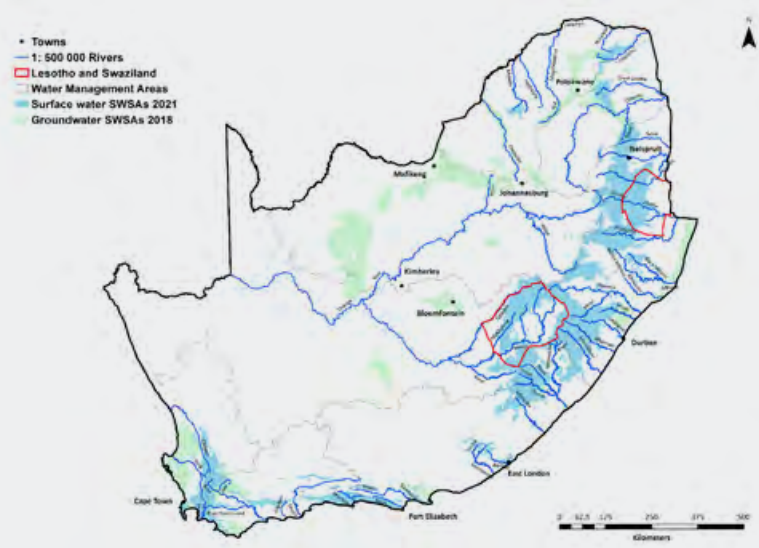
Grade 11 and 12 learners from Saint James High School and Cofimvaba Secondary School, both within walking distance of the net-zero Cofimvaba Science Centre in the Eastern Cape (top), use tablets to score the building's thermal comfort levels. The CSIR uses the data from this citizen science project to monitor the real-time performance of the building from Pretoria.

MUNICIPAL GUIDELINE FOR SUSTAINABLE WATER PLANNING

The CSIR, the Water Research Commission and two Western Cape municipalities have co-created a strategic water source areas framework to help cities across South Africa manage their water resources in partnership with citizens, industry and neighbouring municipalities.

Finalised in March 2025, the municipal-specific framework guides municipalities in developing a strategy for improved governance and protection of strategic water source areas. It provides user-friendly guidance for municipalities and demonstrates practical applications using spatial data and mapping. It draws on lessons learnt, water-related opportunities and challenges identified in the City of Cape Town Metropolitan Municipality and the Witzenberg Local Municipality, as well as international best practice and spatial data resources.

Any local municipality can now use this structured framework and introductory guide to develop strategies for the protection and management of strategic water source areas.



South Africa has mapped 22 strategic water source areas across five provinces that are providing 50% of the country's water resources. These areas are contributing a disproportionate amount of runoff and groundwater recharge to the country's water resources and are found mainly in the eastern and southwestern parts of the country, with some shared with Lesotho and Eswatini.

Investigating the management of water resources in the City of Cape Town and Witzenberg Local Municipality included in-person workshops with municipal officials.

Researchers gain practical insights into contexts where severe resource constraints and water stress conditions are prevalent.

NEW GUIDELINE EQUIPS MUNICIPALITIES TO INTEGRATE CLIMATE-RESILIENCE INTO URBAN DEVELOPMENT PRACTICES

Urban planning experts at the CSIR have developed a new guideline for mainstreaming climate responsiveness and resilience into urban planning. This aims to support local sectors in meeting their obligations under the Climate Change Act, 2024 (Act 22 of 2024). Freely available, the guideline empowers municipalities to align development plans and spatial development frameworks with climate response priorities.

The guideline helps municipalities better anticipate and respond to climate risks. Local sector officials can identify climate risk zones and evaluate interventions to determine their effectiveness in enhancing climate responsiveness and resilience. These insights enable municipalities to focus resources on areas most vulnerable to climate change. Furthermore, the guideline supports the assessment and tracking of progress towards climate goals and facilitates effective reporting.

Released as a joint publication, the guideline is endorsed by the National Treasury-Cities Support Programme of the Department of Forestry, Fisheries and the Environment; the Department of Cooperative Governance and Traditional Affairs; the Department of Land Reform and Rural Development; the South African Local Government Association, and the South African Cities Network.

BUILDING AFRICA'S EARTH OBSERVATION CAPABILITIES

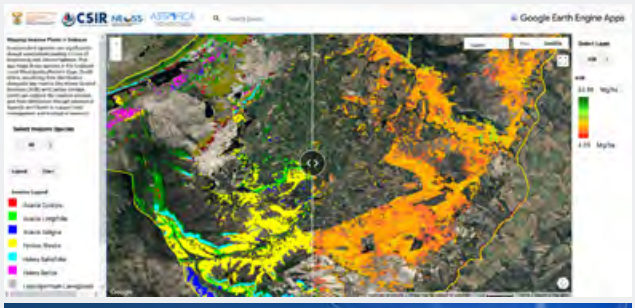
To enhance government's operational readiness, the CSIR-hosted National Earth Observations and Space Secretariat (NEOSS) has spearheaded the development of practical tools. These include the Disaster Watch Application for real-time disaster monitoring and response coordination; the Invasive Alien Species Mapping Tool to support environmental management and biodiversity protection; and the Informal Settlements Remote Sensing Tool to inform human settlements planning, service delivery and disaster risk reduction.

NEOSS is mandated to improve access to Earth observation data, drive digital innovation, strengthen regional and global engagement and coordination, boost institutional growth and support the practical application of Earth observation to advance national priorities.

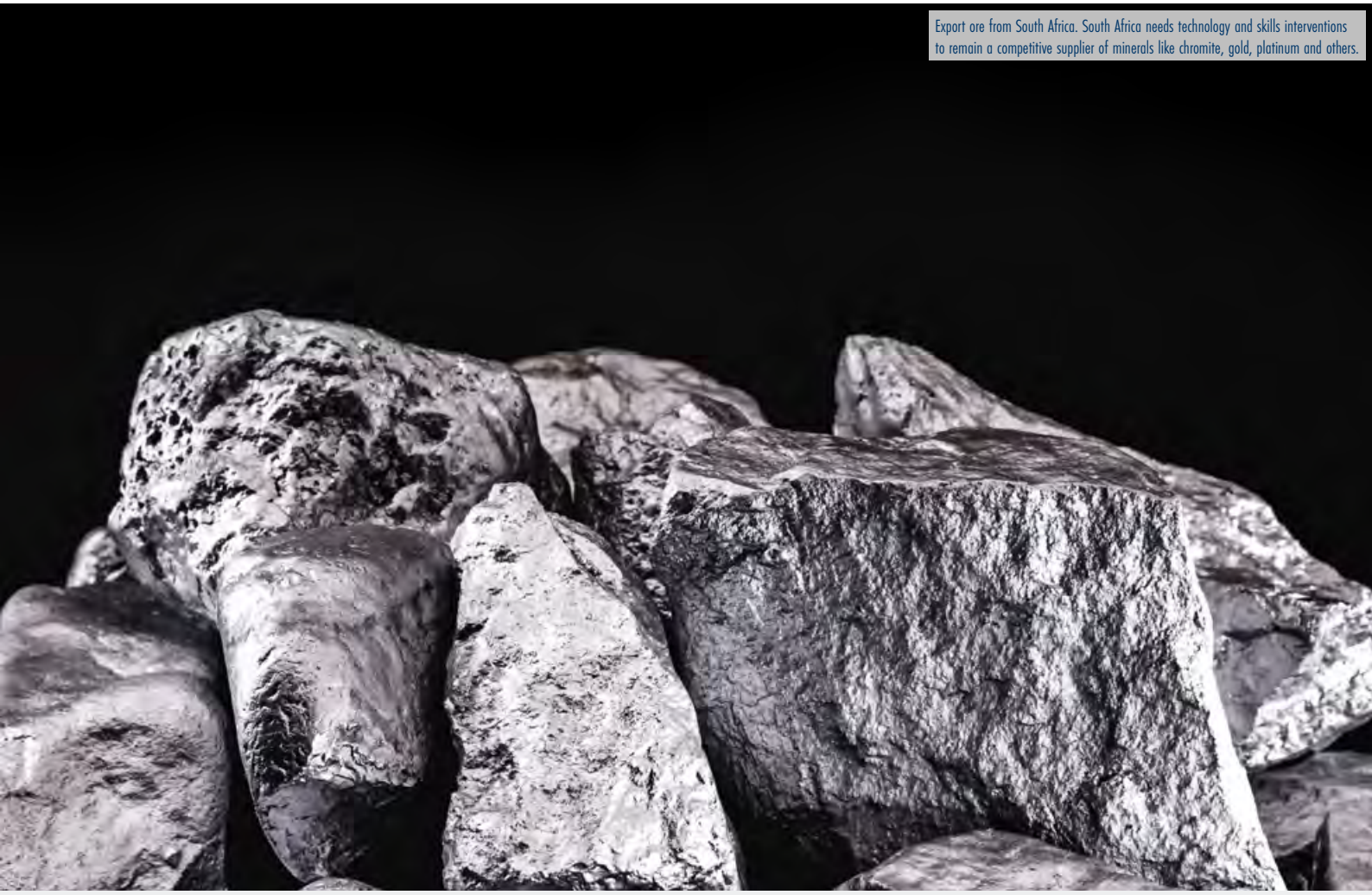
As part of this mandate, NEOSS also conducted six major training workshops on the South African Group on Earth Observations (SA-GEO) Knowledge Hub at various government, academic and private institutions. The SA-GEO Knowledge Hub was formally recognised in 2024. It is a digital platform designed to host, curate and disseminate Earth observation data, services, case studies and learning resources that support national and local decision-making.

Supporting the emerging Earth observation private sector was another key focus. NEOSS supported eight South African small, medium and micro enterprises in showcasing their solutions on strategic platforms, enhancing market visibility, creating collaboration opportunities and increasing exposure to government and research partners.

As part of its commitment to inclusive growth, NEOSS expanded communities of practice in areas such as climate resilience, land degradation, agriculture and disaster management.



The CSIR-hosted National Earth Observations and Space Secretariat supported tools to help track alien invasives and natural disasters.



Export ore from South Africa. South Africa needs technology and skills interventions to remain a competitive supplier of minerals like chromite, gold, platinum and others.

MODERN MINING TECHNOLOGY, SKILLS NEEDED TO REMAIN COMPETITIVE SUPPLIER OF CRITICAL MINERALS

The CSIR has identified several technology and skills requirements for South Africa to remain a competitive global supplier of critical minerals like gold, chromite, iron ore, copper, manganese and platinum group metals.

Despite rich reserves of these minerals and many ongoing exploration and extraction projects, South African mining companies currently incur some of the highest production costs in the world. Previous studies have shown that this is largely due to a reliance on traditional mining techniques rather than modern extraction and processing technologies.

In a study driven by the Mandela Mining Precinct and funded by the Department of Science, Technology and Innovation and the Minerals Council of South Africa, CSIR researchers suggest that to remain competitive, the critical minerals mining industry should invest in research and development towards technologies and digital skills that enhance productivity. They also recommend partnerships with research institutions and global technology firms.

The study further recommends prioritising the health and safety of miners, focusing on the environmental performance of mines and expanding exploration efforts.

Local mineral beneficiation and sustainable mining practices would also boost competitiveness, as would streamlining regulatory processes to create a more predictable and investor-friendly environment.

The study is ongoing and is now focusing on assessing South Africa's capabilities and resources to address these needs.

In addition, the CSIR continues to support the Department of Mineral Resources and Energy with data and expertise related to precious metal groups.

TRANSPORT SAFETY LABORATORY FOR BETTER ROAD SAFETY POLICIES AND PRODUCTS

The CSIR has launched a new laboratory aimed at addressing the significant research gap in understanding the human factors contributing to road crashes in South Africa. Road fatalities continue to pose a growing threat to the safety of drivers, road users and the transport of goods.

The CSIR Transport Safety Laboratory facilitates the study of road user behaviour in real-world and simulated environments. The Drive Laboratory, a vehicle equipped with sensors, including eye-tracking technology, gathers real-time and real-world data on South Africa's roads to study driver behaviour, road design, vehicle systems and environmental conditions that potentially contribute to crashes. Complementing this, the Simulation Laboratory replicates road scenarios to assess driver responses to adverse events and human error in a controlled setting.

The facility enables researchers to collect valuable data on driver behaviour, decision-making processes and potential enhancements to road safety measures. Staffed by experts in transport safety, human behaviour and crash analysis, the laboratory concluded its first pilot study, which examined how drivers perceive fluorescent yellow/green signage. Building on the promising results from the pilot study, the team is preparing to extend the study to public roads and strengthen the evidence base for the inclusion of fluorescent yellow/green signage into the South African Road Traffic Signs Manual as a formal safety standard.

The facility is also open to partnerships with original equipment manufacturers, transport operators and private investors seeking to test and refine new products such as vehicle safety systems, road restraint systems and digital technologies.

Funded by the Department of Science, Technology and Innovation, the laboratory represents a vital step in South Africa's commitment to reduce road fatalities through research-driven, data-informed and technologically enabled solutions.

CSIR Chief Executive Officer, Dr Thulani Dlamini (back), and Minister of Science, Technology and Innovation, Dr Blade Nzimande, at the official unveiling of the CSIR Transport Safety Laboratory. The CSIR team demonstrated the Autonomous Vehicle Simulator, which enables the recreation and study of hazardous road scenarios in a safe and controlled environment. (Below) The minister is introduced to The Drive Lab, a vehicle equipped with sensors to gather live data from South Africa's roads to study driver behaviour, road design, vehicle systems and environmental conditions – all at the same time.


SCANeR studio


SCANeR studio
CSIR

NEW INFRASTRUCTURE FOR HEALTH AND RELATED INDUSTRIES

The CSIR has established two new state-of-the-art facilities to support South Africa's health and related industries: the FuturePharma manufacturing facility and an encapsulation facility.

Small-molecule and biologically active pharmaceutical ingredients can now be manufactured at the CSIR in compliance with current Good Manufacturing Practices. This facility will also support process engineering, digital integration and small and medium enterprise development in the pharmaceutical sector. The facility was funded by National Treasury through the Department of Science, Techology and Innovation.

The supercritical carbon dioxide encapsulation facility enables the microencapsulation of nutraceutical, cosmeceutical and animal health active ingredients. The technology is environmentally friendly and benign, making it ideal for the microencapsulation of sensitive active ingredients and the micronisation of pure compounds.

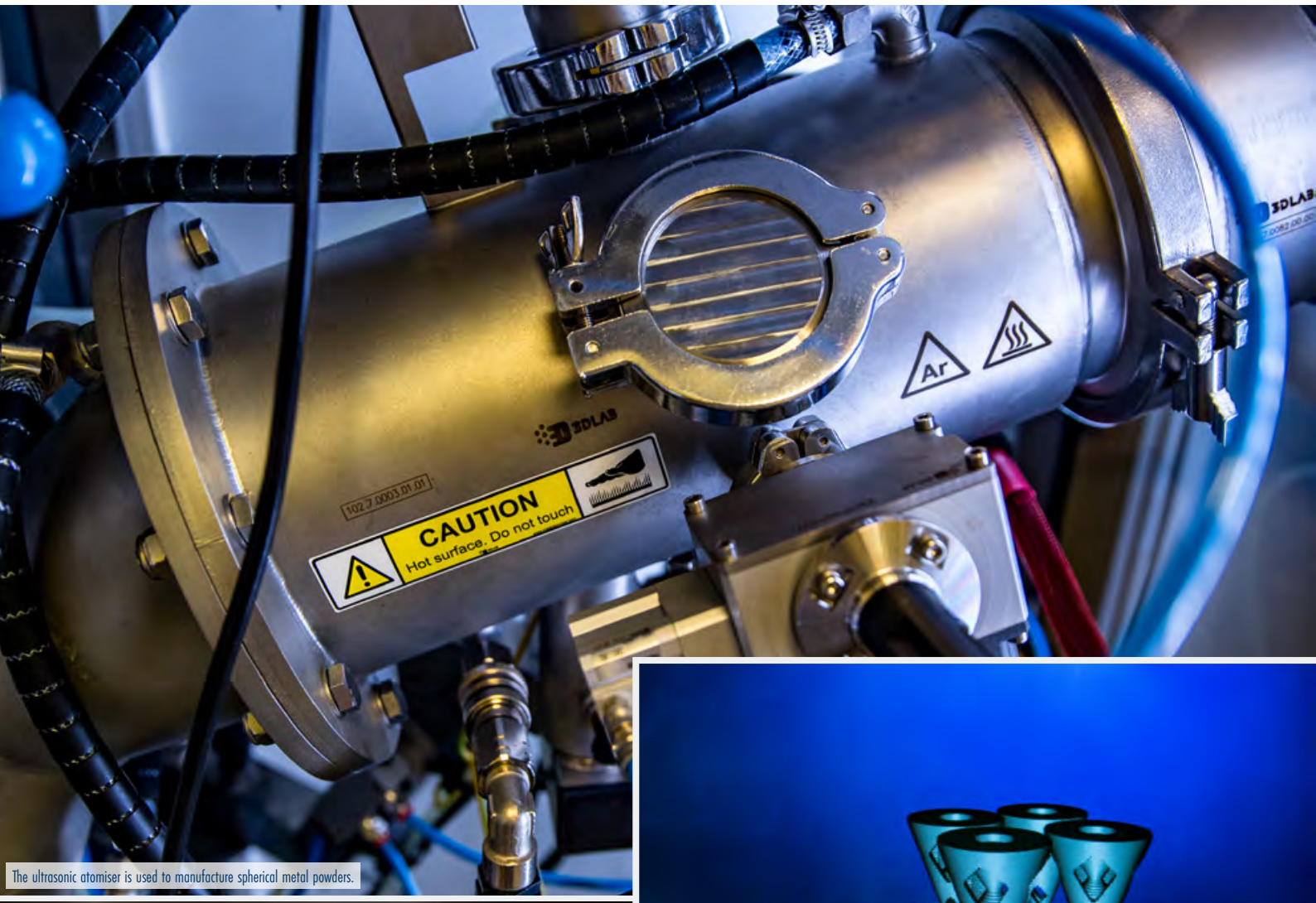
These strategic infrastructure investments will help reduce Africa's dependence on imported medical supplies – a challenge highlighted during the Covid-19 pandemic.

Both facilities will undergo assessments to ensure compliance with local and global regulations, including those required by the South African Health Products Regulatory Authority. This will ensure that high-quality products are manufactured for local and international markets.

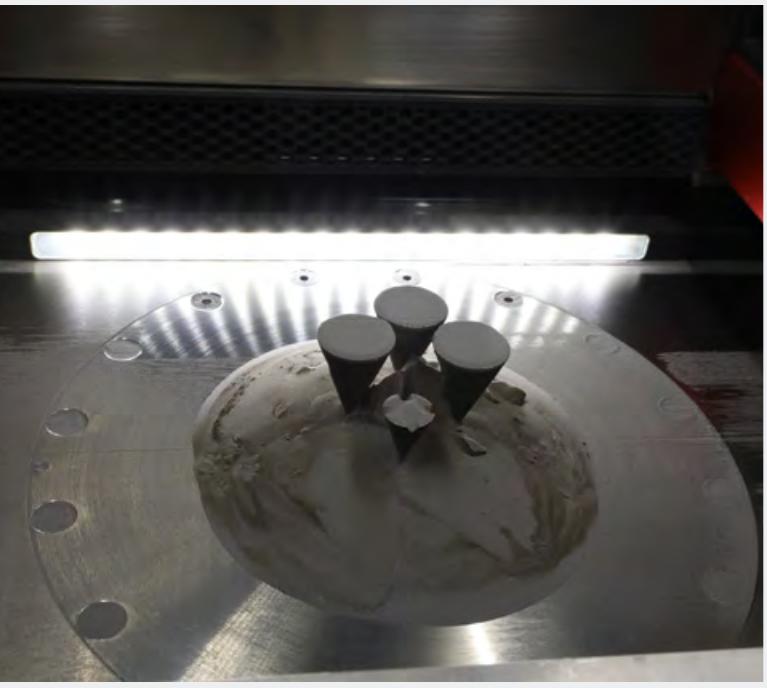
The supercritical CO_2 microencapsulation facility for enhancing the therapeutic benefit of nutraceuticals and offering compound micronisation with tailored particle characteristics.

Left and above: A Vapourtec R-Series instrument, which uses high-performance liquid chromatography pumps, ideal for continuous flow chemistry, to enable precise control of reaction parameters. The instrument improves product quality, reduces waste and supports scalability.

An active ingredient ready for encapsulation in the new supercritical carbon dioxide microencapsulation facility.



The ultrasonic atomiser is used to manufacture spherical metal powders.



A model of 3D-printed 316L stainless steel metal polishing tools and the actual printed tools left.

FIRST BATCH OF STAINLESS-STEEL POWDER ATOMISED AT CSIR

The CSIR's new ultrasonic atomiser facility has successfully produced its first batch of 316L stainless-steel powder, a high-quality material used for three-dimensional (3D) printing. Approximately 8 kg of the powder was produced in this initial run.

In additive manufacturing, 3D printing can be achieved using a technique called powder bed fusion, in which an object is constructed layer by layer using a heat source to fuse together powder particles. South African businesses have traditionally relied on importing high-quality powders for this process. However, the CSIR has now demonstrated the local capability to produce 316L stainless-steel powder using ultrasonic atomisation.

The atomiser can produce a range of metal powders for the South African market. Each batch undergoes strict quality testing to ensure that properties such as particle size, flowability and density meet the required standards.

This development aligns with the national agenda to support localisation and enhance the technological capabilities of local industries, contributing to a more sustainable and competitive manufacturing sector in South Africa.

The ultrasonic atomiser machine was co-funded by the National Research Foundation, an entity of the Department of Science, Technology and Innovation.

Stainless steel powder inside a metallic container, captured as part of the material preparation process for additive manufacturing (3D printing).

SISAL-CSIR PARTNERSHIP TO GROW SKILLS IN EMERGING DIGITAL TECHNOLOGIES

The CSIR has partnered with Sisal S.p.A, a leading international operator in the gaming sector, to empower young talent to shape South Africa's technology future and address the growing demand for skilled professionals in software engineering, data science and cybersecurity.

The partners established a technology hub at the CSIR focused on recruiting, training and developing local graduates through exposure to emerging digital technologies such as software engineering, data science and cybersecurity.

With youth unemployment rates remaining high, the hub provides world-class training designed to open doors for young people to pursue careers in digital technologies. Participants take part in an intensive programme that covers technical skills, ethics and privacy, preparing them to navigate the digital landscape with integrity.

Interns were selected from various institutions of higher learning, with qualifications including National Diplomas, BSc and Honours degrees in computer science, information technology and data science.

Officially launched in October 2024, the programme hosted eight local graduates over six months. To date, five graduates have been absorbed as interns by the CSIR Information and Cybersecurity Centre.

Cybersecurity experts at the CSIR's Virtual Security Operations Centre, where graduates were trained in various aspects of cybersecurity.

Dr Thulani Dlamini, CSIR Chief Executive Officer, welcomed SISAL representatives and eight graduates at the launch of the technology hub established to recruit and train local graduates through exposure to emerging digital technologies.

ENTREPRENEURS PITCH BUSINESS IDEAS, GROW SKILLS

A total of 20 entrepreneurs completed the inaugural Corporate Social Investment Entrepreneurship Development programme in 2024. Of these, four secured pledges totaling R3 million during a business plan pitching session held at the CSIR on 15 July 2024.

The programme is a partnership between the CSIR, Industrial Development Corporation, National Mentorship Movement and Small Enterprise Development Agency. It also leverages the CSIR Alumni Programme, which provided volunteer mentors to guide and support young entrepreneurs.

The CSIR provided entrepreneurs with training, practical support and monitoring and evaluation services. Entrepreneurs were exposed to CSIR facilities to enhance their understanding of processes relevant to their businesses. In addition, the CSIR's technology commercialisation vehicle, CSIR C^3, explored mutually beneficial technology development opportunities with the participants.

The programme concluded with the business plan pitching session, where a panel of experts provided feedback to help entrepreneurs refine their business plans and improve their investment readiness. The session was attended by 20 entrepreneurs, nine mentors and various CSIR partners. The entrepreneurs were from Gauteng, KwaZulu-Natal and the Western Cape.

Prof. Adnan Abu-Mahfouz features on global list of Top 2% Scientists in 2024

Prof. Adnan Abu-Mahfouz of the CSIR has been recognised on Stanford University's prestigious list of the top 2% of scientists. This follows the release of the 2024 Top Scientists List, compiled by Stanford University in collaboration with Elsevier, which honours leading researchers from around the world.

Abu-Mahfouz is a distinguished researcher and academic in the field of computer engineering. He holds a PhD and an MEng degree from the University of Pretoria and has made significant contributions to industrial-focused research and development, particularly in the internet of things, low-power wide-area networks, cognitive radio, software-defined wireless sensor networks and smart systems.

He is a chief researcher at the CSIR and manages the organisation's emerging digital technologies for the fourth industrial revolution. In addition, he holds academic appointments as an Extraordinary Professor at the University of Pretoria, a Professor Extraordinaire at Tshwane University of Technology and a Visiting Professor at the University of Johannesburg.

The Top Scientists List is based on a rigorous analysis of scientific metrics, including the H-index, citation counts and other indicators of research impact and excellence. Abu-Mahfouz's inclusion in the list reflects the global relevance and influence of his research, as evidenced by the frequency with which his work is cited by other scientists.

Dr Lucia Steenkamp promoted to chief researcher

In her 30th year at the CSIR, Dr Lucia Steenkamp, a specialist in biocatalysis and green chemistry, has been promoted to chief researcher.

Since 2021, she has served as the Director of the CSIR-hosted Industrial Biocatalysis Hub, where she leads and trains post-doctoral researchers, students and interns in the development of eco-friendly chemical processes using microorganisms and enzymes rather than harsh chemicals. Steenkamp's team particularly helps small businesses by turning materials as diverse as paper waste and citrus peels into novel products like bioplastics, animal feeds, fragrances, modified plant oils, insecticides, fungicides and drug precursors.

Steenkamp won the *South African Women in Science Award for Distinguished Women in Research and Innovation* in 2018/2019 and has many patents, board memberships and publications to her name. Her work has also seen several technologies developed for or transferred to industry partners and small businesses, including Puris, CPT, Linuset, APBIO, ConnectMe, Tautomer, Khepri, Immobazyme, Paromatics, Clive Teubes Africa, BioDx, Stilhoek Boerdery and Biosolve.

She has a PhD in biochemistry from Rand Afrikaans University (now the University of Johannesburg).

Dr Moshe Masonta promoted to chief research technologist

Radio frequency and broadband expert Dr Moshe Masonta was promoted to chief researcher level in October 2024.

Hailing from Ga-Maphalle village in Limpopo, Masonta joined the CSIR in 2008. With a strong background in electronic engineering and telecommunications, he leads a diverse team of scientists and engineers developing connectivity solutions for rural and underserved communities in southern Africa.

His areas of expertise include dynamic radio frequency spectrum access and management, broadband community networks and radio access network technologies, and 5G mobile networks. He has contributed to several technology demonstrators at the CSIR and has authored or co-authored over 40 peer-reviewed publications. Since 2018, he has also represented South Africa on the International Federation for Information Processing Technical Committee on Communication Systems.

He holds a DTech (Electrical Engineering) from Tshwane University of Technology.

(From left) Leoni Grobler, Executive Education Director and Acting Operations Director at Wits Business School (WBS) and a WBS Exco Board Member, Dr Mutanga Shingirirai (CSIR) and Dr Rachel Chikwamba, CSIR Group Executive: Advanced Chemistry and Life Sciences.

Andile Mabindisa, CSIR Group Executive: Human Capital and Communication (left) and Sonia Newton, Executive Relationship Manager, Wits Business School.

LEADERSHIP DEVELOPMENT AND SKILLS TRAINING FOR CSIR STAFF

As part of the Leadership and Management Development Programme, 77 CSIR staff members graduated from various transitional leadership and management development programmes offered by the University of Cape Town's Graduate School of Business and the Wits Business School. These include programmes such as the Executive Development Programme, Senior Leadership Development Programme, Management Development Programme and Accelerated Managerial Programme.

Furthermore, 78 CSIR staff members graduated from various in-role management programmes such as Managing Me, Managing Others and Managing Business Results. These programmes were offered in partnership with the Maccauvlei Academy. Participants engaged in project-based research and active learning, ensuring that their newly acquired knowledge could be applied within the CSIR environment.

Their research addressed key organisational priorities, including collaboration, transformation, income diversification, cost-saving strategies, staff turnover in science, engineering and technology, data management, resource efficiency and waste management. Research findings were presented to business school officials and CSIR leadership.

In addition, 18 CSIR staff participated in the Executive Coaching and 20 in the Mentorship train-the-trainer.

CSIR staff who completed the *Future Leaders Development* programme.

The CSIR celebrated the graduation of the Executive Development Programme and the Leadership and Management Development Programme – significant milestones in ensuring sustainability through building a strong pipeline of future CSIR leaders. The graduation ceremonies are a testament to the hard work and expertise of these individuals, reflecting their commitment to personal and professional growth and the organisation's commitment to supporting the development of CSIR staff. (Above) CSIR staff who completed the *Future Leaders Development* programme.

(From left) Frans Karg, Programme Director at Wits Business School Executive Education, Dr Coralie van Reenen, CSIR, *Top Student (third place)*, Andile Mabindisa, CSIR Group Executive: Human Capital and Communication, Lawrence Moeng, CSIR, *Top Student (third place)* and Steven Delport, Wits Business School.


Lindelwa Shongwe operates a bioreactor as part of his training as a Youth Employment Service intern at the CSIR.

SUPPORT FOR YOUTH EMPLOYMENT SERVICE INTERNS

The CSIR hosted 65 Youth Employment Service (YES) interns during the 2024/2025 period. Out of the 65, 24 youths were placed at the CSIR and 41 were hosted by CSIR partners and collaborators. Five YES interns have since been employed by the CSIR while some have secured employment with partner organisations..

Nontsikelo Mdluli, originally placed in the CSIR's Legal and Compliance Office, transitioned into the CSIR's internship programme and distinguished herself by winning three awards during the 2024/25 financial year.

YES intern Neo Moloi, who was initially placed in the CSIR's Hosted Programmes, has since been appointed to a three-year contract as a project administrator.

After being placed through the YES programme and participating in the CSIR's graduate-in-training initiative, Mamokete Makhubo was permanently appointed as a candidate engineer in the field of defence and security.

Another intern, Lindelwa Shongwe, is learning how to manufacture fungal-based protein, known as mycoprotein, at the CSIR Biomanufacturing Industry Development Centre. The production process and product were developed by the CSIR for the local company MycoSure. Once his training is complete, Shongwe will join the small, medium and micro enterprise to help establish its own manufacturing plant.

BURSARIES FOR CSIR STAFF DEPENDENTS

In February 2024, the CSIR Board approved the Staff Dependents Bursary, marking the first time that the organisation has offered this form of support as part of its employee value proposition. The programme supported 115 dependents during the 2024 academic year.

For the 2025 academic year, a total of 174 dependents – including 80 continuing students from the previous intake – have been selected for funding.

BURSARIES FOR TOP THREE MATRICULANTS AT RURAL SCHOOLS

Every year, the CSIR's Corporate Social Investment (CSI) initiative awards bursaries to the top-performing matriculants from rural schools. The programme supports learners who intend to pursue qualifications in science, technology, engineering and mathematics at South African public universities. Learners are identified through partner schools selected by the CSIR.

The CSI programme focuses on supporting schools in rural areas classified within quantile levels one to three, particularly those making strong efforts to improve academic performance in physical science and mathematics. The selected schools represent regions where the CSIR operates, aligning with the objectives of the programme of promoting employee volunteerism and participation in CSI activities.

The six schools that were chosen are based in Gauteng (one), KwaZulu-Natal (four) and the Western Cape (one).

Notably, four students supported through this programme graduated this year. Two have been absorbed into the CSIR through the graduates-in-training programme, while the other two are pursuing further studies.

CSIR PARTNERSHIP WITH TVET COLLEGES

The CSIR is engaging relevant stakeholders as part of its collaboration drive to establish and maintain strategic partnerships with key stakeholders within the post-school education and training (PSET) system in support of innovation and skills development. The CSIR has signed Memorandum of Understanding (MoU) with Tshwane South TVET College (TSC), and one of the focus areas on the scope of this MoU is placement of TVET students at the CSIR to support their work integrated learning. Subsequently, the CSIR hosted 10 National Certificate: Vocational (NCV) students from TSC for a duration of 12 months. The MoU with Tshwane North TVET College (TNC) is under review by the college, and will be finalised soon.

The cohort of participants from Africa who completed the *Quality Control and Downstream Operations in Biomanufacturing* course, as part of the CSIR's African Biomanufacturing Workforce Training and Skills Development Programme.

SKILLS DEVELOPMENT FOR AFRICAN VACCINE MANUFACTURING TARGET

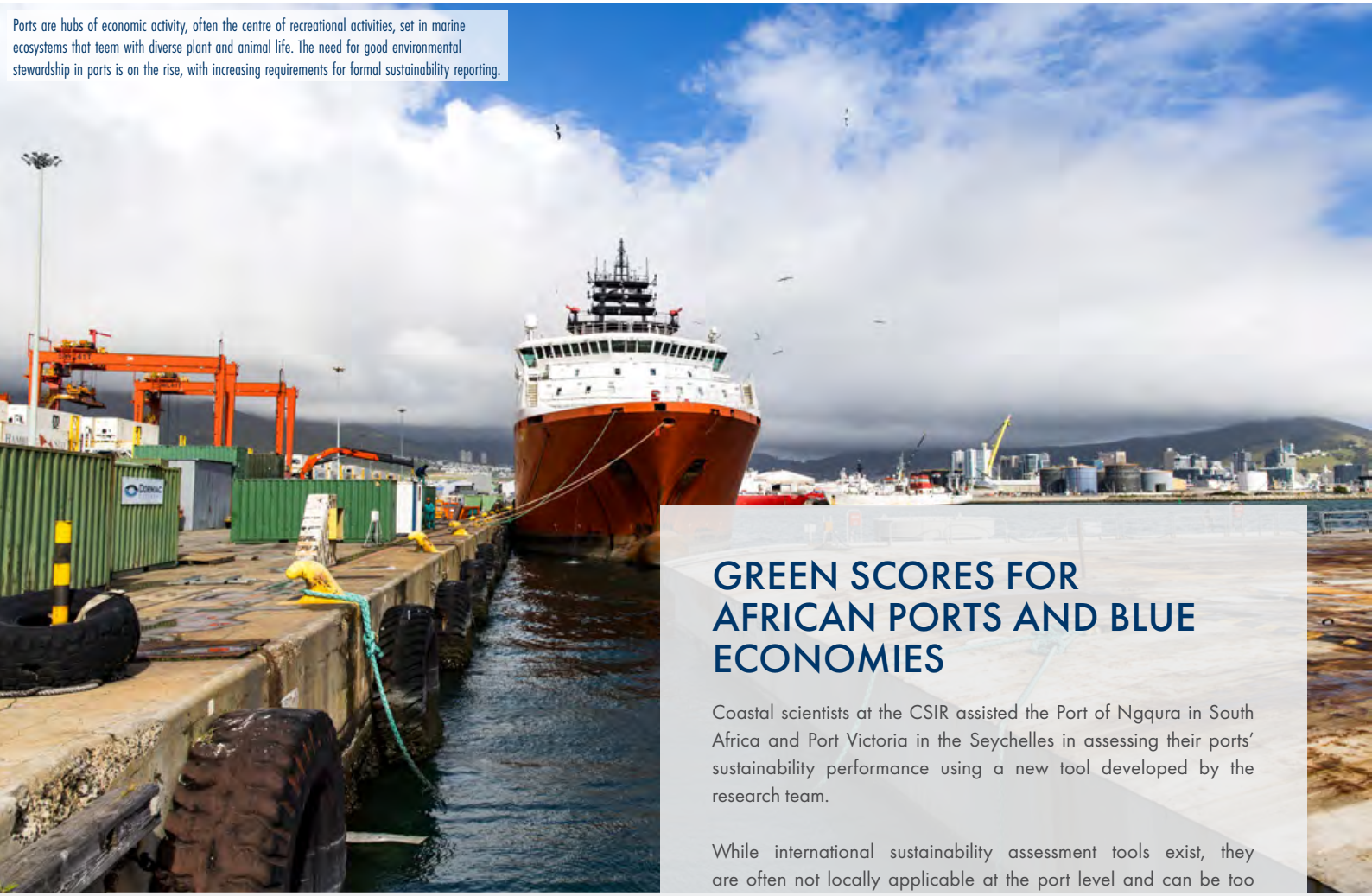
The CSIR has trained 75 researchers and scientists across Africa to help build local capacity for the manufacturing of biologics, vaccines, recombinant proteins and therapeutics.

Theoretical and hands-on training was provided as part of the CSIR's African Biomanufacturing Workforce Training and Skills Development Programme. Courses in biomanufacturing technologies, vaccine production and biopharmaceutical quality management systems were offered during 2024 and 2025.

The programme is aimed at African manufacturers, scientists and other key players involved in the development and scaling-up of vaccine production processes and active pharmaceutical ingredients.

It aligns with the African Union's target to produce 60% of Africa's vaccine needs by 2040 by building regional vaccine manufacturing capabilities, securing technology transfers and promoting demand for African-made vaccines.

Repeat offerings of the programme are ongoing, with additional courses in Good Manufacturing Practice and large-scale biomanufacturing.



Ports are hubs of economic activity, often the centre of recreational activities, set in marine ecosystems that teem with diverse plant and animal life. The need for good environmental stewardship in ports is on the rise, with increasing requirements for formal sustainability reporting.

GREEN SCORES FOR AFRICAN PORTS AND BLUE ECONOMIES

Coastal scientists at the CSIR assisted the Port of Ngqura in South Africa and Port Victoria in the Seychelles in assessing their ports' sustainability performance using a new tool developed by the research team.

While international sustainability assessment tools exist, they are often not locally applicable at the port level and can be too scientifically complex for port operators to use. This prompted the CSIR to develop the Port Sustainability Performance Index – a tool that is globally comparable yet locally relevant.

The index measures economic, social, environmental and governance sustainability in alignment with the United Nation's 17 Sustainable Development Goals.

Measures to mitigate coastal urbanisation, address the impacts of climate change and support net-zero operations are being facilitated through the voluntary use of the index. The tool is being promoted in collaboration with the Port Management Association of Eastern and Southern Africa and the Transnet National Ports Authority.

Following successful implementation at the Port of Ngqura and Port Victoria, plans are underway to roll out the tool to all commercial ports in South Africa, as well as to ports in the Western Indian Ocean region.

In its role as a technical partner to the United Nations Nairobi Convention Secretariat, the CSIR helps ensure that engineering and environmental protection standards and processes are in place for effective port planning and operations.

MODERN NAVAL RADAR SECURES FIRST ORDER FROM EUROPE

Hensoldt and the CSIR have integrated and demonstrated the first prototype of an advanced surveillance radar that provides naval forces and maritime security authorities with unprecedented situational awareness.

The CSIR-developed core radar elements were integrated into the Quadome radar system of Hensoldt South Africa, a subsidiary of Hensoldt GmbH, a leading international company in the supply of sensor solutions for defence and security applications. The collaboration is one of the largest South African radar technology joint development programmes to date.

Quadome is a software-defined, multi-function cognitive radar for naval air and surface surveillance, providing situational awareness, rapid detection and tracking and extremely short reaction times.

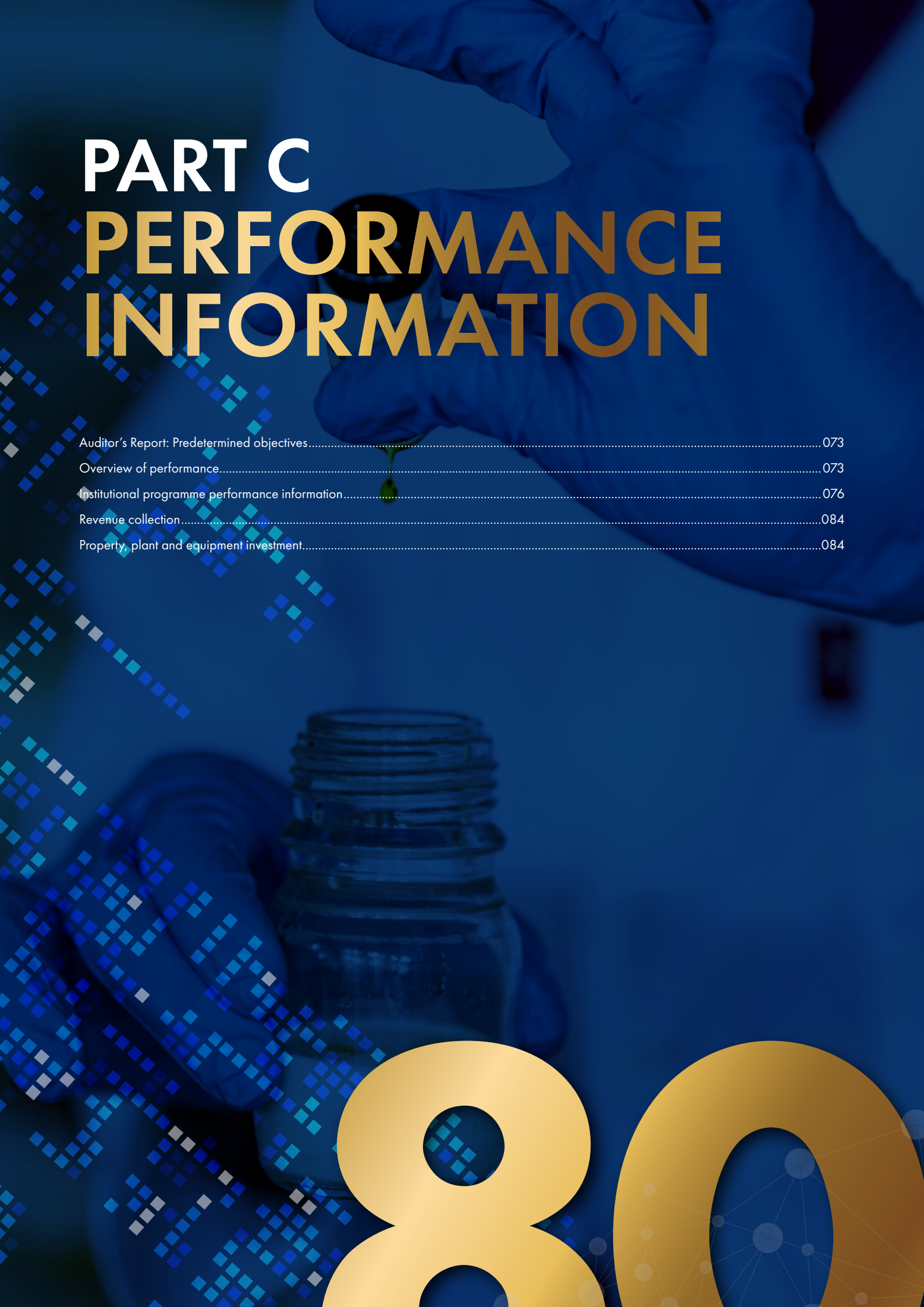
The fully South African-developed radar features two main operational modes that simplify operator interaction and reduce workload. Surveillance mode is used for general surface and air surveillance, while self-defence mode is employed in high-threat situations and for target engagement, with helicopter support continuously available in either mode.

Quadome is aimed at the global market for tactical naval radar systems, primarily targeting offshore patrol vessels, corvettes, light frigates and support vessels. A first order has been received for the UK Royal Fleet Auxiliary's new fleet solid support vessels.

With its low mass and weight and attractive price-performance ratio, Quadome offers three-dimensional air surveillance and air defence capabilities to vessels that might otherwise only be equipped with two-dimensional target detection.

The Quadome radar, integrated and tested at the CSIR in Pretoria in preparation for development trials and coastal demonstrations.

PART C
PERFORMANCE INFORMATION



AUDITOR'S REPORT: PREDETERMINED OBJECTIVES

The Auditor-General of South Africa (AGSA) currently performs the necessary audit procedures on the performance information to report on the usefulness and reliability of selected material performance indicators. The material findings against predetermined objectives are reported in the Annual Performance Report section of the Auditor's Report.

Refer to pages 135 - 139 of this report for the Auditor's Report, published under Part G: Annual Financial Statements.

OVERVIEW OF PERFORMANCE

SERVICE DELIVERY ENVIRONMENT

One of the key areas identified by the CSIR to ensure the success of its business model is enhancing collaboration with state-owned enterprises (SOEs) and government more broadly. As a Schedule 3B national government business enterprise with no direct service delivery mandate, the CSIR nevertheless measures its impact by how effectively it implements projects on behalf of government departments and SOEs in support of building a capable state.

In the 2024/25 financial year, the CSIR undertook more initiatives for government than in any other year over the past six years. These initiatives include (see Part B, pages 45-57 for more detail):

- **National and provincial election forecasting:** The CSIR accurately predicted the 2024 national and provincial government election outcomes using a sophisticated predictive model with a margin of error of just two percentage points. This work supports election transparency and engagement by the general public, as well as enhancing local statistical and mathematical predictive modelling capabilities to support government and industry.
- **Taxi ranks as economic hubs:** In partnership with the Gauteng Department of Roads and Transport, the CSIR developed a policy framework for transforming intermodal transit facilities into economic hubs. This includes technical guidelines with two-dimensional and three-dimensional architectural designs and decision-support systems to identify suitable locations for future taxi rank developments. The initiative aims to convert minibus taxi ranks into economic hubs to support local economic growth and job creation in Gauteng townships.
- **Water security and economic development:** The CSIR developed a user guide for managing South Africa's strategic Water Source Areas and completed projects to create economic hubs around minibus taxi ranks in Gauteng.
- **Critical Minerals Strategy:** The CSIR is contributing to the Department of Mineral Resources and Energy's Critical Minerals Strategy by identifying research, innovation and capability gaps to support southern African mining companies in becoming globally competitive.
- **Climate responsiveness in urban planning:** In December 2024, the CSIR developed guidelines – endorsed by multiple government departments – to help municipalities integrate climate resilience into urban planning.
- **Green Hydrogen Development Assessment:** The CSIR conducted an exploratory assessment of the cumulative ecological, economic and employment impacts of three green hydrogen development scenarios in Saldanha Bay.
- **Environmental assessment for Boegoebaai Port:** The CSIR is conducting a study over a 24-month period to guide sustainable planning for the proposed Boegoebaai Port and Special Economic Zone, in support of the green hydrogen economy.
- **Green Hydrogen Environmental Impact Assessment Guideline and Atlas:** The launch of the Environmental Impact Assessment Guideline and the Green Hydrogen Potential Atlas aims to promote green hydrogen projects by leveraging South Africa's abundant renewable energy resources.
- **Renewable energy transition:** The CSIR is advancing renewable energy research, including various studies on green hydrogen and offshore wind energy, while supporting regional strategies for implementation.
- **Radar technology:** The CSIR developed and demonstrated advanced surveillance radar technology and underwater communication systems, showcasing its contributions to the defence sector.
- **Cybercrime reporting tools:** The CSIR has developed a web-based tool that enables financial and electronic communications service providers to report cybercrimes directly to the South African Police Service.
- **Development of a new uniform for the South African National Defence Force:** The CSIR has recently developed a new camouflage uniform and enhanced combat boots for the South African Army. These feature gender-specific designs, improved materials and enhanced comfort technologies. To date, more than 2 000 uniform sets and 3 000 pairs of boots are undergoing wearer trials across various operational environments. Localisation of fabric production has been secured. Final specifications will be submitted to the Department of Defence, with a full rollout planned for the 2026/27 financial year.

ORGANISATIONAL ENVIRONMENT

Strategically and operationally, the CSIR's internal context is characterised by a stable top executive and senior management structure, and an environment that promotes high performance, collaboration and excellence. There were no resignations at the executive level and operations remained uninterrupted during the reporting period. The CSIR continues to implement initiatives aimed at attracting, developing and retaining top talent to deliver on the organisation's strategic objectives. Talent sourcing strategies were enhanced during this period, resulting in improved turnaround times for filling vacant positions. An executive coaching programme and a values-based executive development programme were successfully implemented, strengthening leadership development across the organisation.

In 2024/25, the CSIR had five additional scientists at the highest level of seniority compared to the previous financial year, achieved through career ladder promotions and the appointment of two chief researchers through the Capability Investment Development Programme.

The diversity of the CSIR's workforce remains a key enabler of organisational performance in 2024/25. The percentage of female chief researchers increased by 5% compared to the previous year, primarily due to the promotion of two female researchers during the 2024/25 career ladder assessment process.

Emerging and long-term systemic challenges for the organisation are outlined in the Risk Management section in Part D below (pages 88-89). A summary is provided below.

Systemic risks

- The ongoing decline in Parliamentary Grant (PG) funding continues to impact the organisation's ability to invest in infrastructure, adopt new systems and technologies, advance certain research, development and innovation (RD&I) initiatives, as well as mitigate other risks. Additionally, the reluctance of state institutions to implement National Treasury Note 3 on procurement hampers mitigation efforts, particularly in addressing public sector needs.
- The loss of, and/or difficulty in attracting and retaining key skill sets impedes the execution of contract work, pipeline projects and revenue generation due to limited capacity to deliver on commitments. The organisation's ability to offer certain capabilities and services is also affected by inadequate skills and expertise.
- The United States (US) executive order to cut funding aid to South Africa presents a potential risk, possibly affecting the sustainability of certain contract work and negatively impacting contract income.
- Limited investment in R&D by the private sector and low economic growth also affects the CSIR's ability to grow private sector income.

Emerging business risks:

- Irregular, fruitless and wasteful expenditure transactions;
- Extreme weather conditions that may impact infrastructure, field projects and other operational activities; and
- The effect of US trade tariffs on future possible CSIR imports and exports.

Overall, the CSIR remains committed to addressing these risks through defined mitigation strategies and continuous monitoring. The organisation recognises the importance of cross-functional collaboration across departments to manage and mitigate risks effectively. This proactive approach to risk management supports the CSIR's sustainability and its ability to achieve strategic objectives.

KEY POLICY DEVELOPMENTS AND LEGISLATIVE CHANGES

The Public Procurement Act, 2024 (Act 28 of 2024) was approved by the President on 18 July 2024 and published in the Government Gazette on 23 July 2024. The Act was developed with the intention of establishing a procurement framework, with detailed provisions to be outlined in ministerial regulations. Procurement systems, institutional policies and related instructions will be aligned with this framework and its regulations. In response to a circular issued by National Treasury requesting Schedule 2 and 3B public entities to submit names of nominated officers for participation in working groups, the CSIR actively engaged in the regulation drafting process. The nominated officers participated in working group meetings, providing commentary and assessing the potential impact of the Public Procurement Act on CSIR operations and mandate. These meetings commenced in November 2024 and formally concluded on 7 March 2025.

Instruction Note 1 of 2024/25 took effect on 1 September 2024. It prescribes revised cost containment measures for departments, constitutional institutions and public entities listed in Schedule 3 to the Public Finance Management Act, 1999 (Act 1 of 1999). This Treasury instruction outlines the cost containment measures relating to consultants, the hosting and attendance of local and international conferences and provides guidance for travel and subsistence. In response, the CSIR updated its travel policy and standards to align with the revised instruction.

The CSIR also amended its internal policies to comply with the revised Broad-based Black Economic Empowerment (B-BBEE) Codes of Good Practice, which now place a stronger emphasis on measurable impacts in areas such as skills development, procurement and enterprise development. These revisions aim to foster genuine transformation rather than mere regulatory compliance.

PROGRESS TOWARDS ACHIEVEMENT OF INSTITUTIONAL IMPACTS AND OUTCOMES

Six years of focus on industrial development

The CSIR Strategy was launched in the 2019/20 financial year with the goal of amplifying the "I" in CSIR through RD&I activities that support industrialisation development. It also introduced a business model designed to increase the relevance of the CSIR's products and services to the private sector.

The strategy is driven by a clear intention: to achieve growth, sustainability, impact and relevance. In alignment with this intention and the organisation's strategic objectives, the CSIR has established a set of key performance indicators (KPIs) to guide its actions, inform decision-making and track progress in the implementation of the CSIR Strategy.

a. Deepening partnerships with industry

A key focus has been forging stronger relationships with private sector partners. In 2024/25, the CSIR achieved a 244% increase in the number of technologies localised for industry partners compared to 2019/20, a 113% increase in joint technology development activities with industry partners, and a 51% increase in the number of small, micro and medium enterprises (SMMEs) supported.

Staff exchange programmes with industry partners also increased significantly by 382% in 2024/25 compared to 2019/20.

b. Creating a balanced innovation portfolio

The CSIR recognises the need to shift its innovation portfolio towards technology development and transfer activities to create a more balanced approach alongside basic research activities. In 2024/25, this shift yielded a 65% increase in technology demonstrators compared to 2019/20.

c. Deepening partnerships with higher education institutions

Although there are no specific KPIs for partnerships with higher education institutions (HEIs), the CSIR continues to invest in strategic collaborations with HEIs and in building a strong human capital pipeline.

In 2024/25, the percentage of science, engineering and technology (SET) staff with PhDs was 3% lower than in 2019/20.

d. Collaborating with SOEs and government

In support of building a capable state, the CSIR's performance has been strong. In 2024/25, the number of standards developed for the state increased by 180%, compared to 2019/20. The CSIR also achieved a 234% increase in projects implemented on behalf of government departments and SOEs. These results reflect strong alignment with the organisation's strategic intentions. Although there was a 17% decrease in the number of reports supporting policy development, considerable policy work was carried out over the period.

e. Increasing the focus on innovation and commercialisation

In 2024/25, there was a 140% increase in the number of technology license agreements signed with industry partners compared to 2019/20. However, the number of patents granted decreased by 19%.

Several innovative projects were undertaken by the CSIR in 2024/25 to support various industrial sectors. One notable project involved the development of custom laser systems for De Beers Ignite mines in Botswana, utilising Raman spectroscopy to improve diamond sorting processes. Another significant initiative was the creation of a nano-reinforced polymer composite in collaboration with a Gauteng-based small business, Filament Factory. This composite provides electromagnetic interference shielding and improved electrical conductivity for applications such as stealth technology and medical implants. Additionally, the CSIR engineered a biocomposite material using waste sawdust and recycled plastics, offering a sustainable alternative to fossil-based materials for Plastech SA.

The CSIR also supported emerging poultry farmers in Limpopo through a blockchain-based platform that enhances farm management practices and integrates them into commercial supply chains. Furthermore, the CSIR has developed a precision agriculture information system that provides real-time insights into crop and soil health. This system has been adopted by the South African Grain Association and the Eastern Cape Development Corporation. Other notable projects include the development of a sustainable bioprocess for producing fungal-based protein for a South African biotechnology company, MycoSure; a green chemistry approach for producing cannabinoids and various initiatives promoting circular economy practices and support for local manufacturing.

CSIR C^3 has been actively involved in partnership engagements to drive the commercialisation of potential technologies. Productive discussions have taken place with the Industrial Development Corporation and Sasol for potential collaborations. Key initiatives include MycoSure, Stratafy, LES Spin-out, Herbathone™, Meerkat Wide Area Surveillance System (WASS), Passive Radar, Biodegradable Polymer Formulations, MARTI TB Diagnostics and the Grow A Car/BioFibre Cluster. These projects are at various stages of development and

commercialisation, with some having already secured co-investment and market validation. The commercialisation portfolio has made significant progress, including signed term sheets for MycoSure, Stratafy, LES and Adler Aerospace; successful clinical trials for Herbathone™ and advancements in the Meerkat WASS for counter-poaching applications.

Several other elements of the strategy, as reflected in the KPIs, highlight transformation within the SET staff complement, investment in property, plant and equipment (PPE), income diversification and adherence to good governance practices.

f. Transformation of SET staff

In 2024/25, the total number of SET staff was 18% higher than in 2019/20. The percentage of black SET staff increased by 9.6%, while the percentage of female SET staff rose by 5% over the same period.

At the chief researcher level, the number of researchers increased by 91% compared to 2019/20. The percentage of black researchers at this level increased by 11% and the percentage of female staff rose by 6%.

Among principal researchers, there was a 36% increase in numbers since 2019/20. Over this period, the percentage of black principal researchers grew by 13% and the percentage of female principal researchers increased by 7%.

g. Infrastructure investment

In 2024/25, the organisation invested 491% more in property, plant and equipment compared to 2019/20.

h. Income diversification

Since 2019/20, total revenue has increased by 28%, despite a 10% reduction in PG funding. Income from the private sector increased by 40%, while income from international sources, grew by 175%. Public sector income also showed growth over the same period.

i. Good governance

The CSIR's B-BBEE level improved from Level 4 in 2019/20 to Level 1 in 2021/22 and has been consistently maintained at Level 1 since.
The recordable incident rate (RIR) decreased significantly from 1.82 to 0.12, reflecting a strong safety culture.
The CSIR has also maintained an unqualified audit record for several years.

INSTITUTIONAL PROGRAMME PERFORMANCE INFORMATION

The CSIR Strategy include clearly defined Strategic Objectives (SOs), derived from its prevailing context.

CONDUCT RESEARCH, DEVELOPMENT AND INNOVATION OF TRANSFORMATIVE TECHNOLOGIES AND ACCELERATE THEIR DIFFUSION.

This SO seeks to ensure that the CSIR undertakes cutting-edge research and development in areas that will bring transformative change in the South African economy and society.

IMPROVE THE COMPETITIVENESS OF HIGH-IMPACT INDUSTRIES TO SUPPORT SOUTH AFRICA'S RE-INDUSTRIALISATION BY COLLABORATIVELY DEVELOPING, LOCALISING, AND IMPLEMENTING TECHNOLOGY.

This SO seeks to improve the competitiveness of South Africa's high-impact industries through research, development, technology localisation and industrialisation in a collaborative manner with partners, thereby contributing to the reindustrialisation of the country.

DRIVE SOCIOECONOMIC TRANSFORMATION THROUGH RESEARCH, DEVELOPMENT AND INNOVATION THAT SUPPORTS THE DEVELOPMENT OF A CAPABLE STATE.

This SO emphasises the CSIR's role in supporting the development of a capable state and enabling the government to drive the socioeconomic transformation of South Africa through RD&I.

BUILD AND TRANSFORM HUMAN CAPITAL AND INFRASTRUCTURE.

This SO seeks to build and transform the required human capital and invest in infrastructure to drive industrialisation and the advancement of society.

DIVERSIFY INCOME AND MAINTAIN FINANCIAL SUSTAINABILITY AND GOOD GOVERNANCE.

This SO seeks to improve the CSIR's financial sustainability by diversifying revenue sources and optimising the business model to achieve competitiveness supported by good (efficient and sound) governance.

SO1: CONDUCT RESEARCH, DEVELOPMENT AND INNOVATION OF TRANSFORMATIVE TECHNOLOGIES AND ACCELERATE THEIR DIFFUSION

The five KPIs under SO1 measure the CSIR's ability to generate high-quality knowledge and to diffuse this know-how into industries where it can be translated into tangible technology solutions (see RD&I highlights in Part B above, pages 21-25).

The CSIR uses various means to protect its intellectual property (IP), but it has a KPI that specifically measures the patenting route, as is conventionally done worldwide. To accelerate the diffusion of technologies into the market and/or society, the CSIR also measures its ability to convert ideas into proof-of-concept prototypes.

As illustrated in Table 1 below, in 2024/25, the CSIR exceeded its target for publication equivalents (KPI 1), new patents granted (KPI 3) and new technology demonstrators (KPI 4) by 67%, 42% and 24% respectively. This KPI 3 is beyond the control of the organisation, as granting of patents depends on uncertain prosecution periods in the examining countries. A granted patent is an indication of the possible market utility of the protected IP in the countries that granted the protection rights.

The CSIR met the target for new priority patent applications filed (KPI 2). The basic purpose of the right of priority is to safeguard, for a limited period, the interests of a patent applicant in their endeavour to obtain international protection for their invention. At the CSIR, priority patent application filings serve as a pipeline indicator of patent families. This KPI and that of patent granting are related, as a healthy pipeline is important to ensure the granting of patents with potential commercial value.

The CSIR also met its target for new technology license agreements signed (KPI 5). This KPI measures the uptake of CSIR technology by industry partners.

Table 1: KPIs that measure knowledge generation, IP protection, prototype development and licencing of technologies

SO1: Conduct research, development and innovation of transformative technologies and accelerate their diffusion						
Output indicator	**Audited actual performance 2022/2023**	**Audited actual performance 2023/2024**	**Planned annual target 2024/2025**	**Actual achievement 2024/2025**	**Deviation from planned target to actual achievement 2024/2025**	**Reasons for deviations**
KPI 1: Publication equivalents	398	390	298	**497**	199	The increase in publications is attributable to multiple reasons including increased research output on active projects, increased collaboration with HEIs and industry, as well as the publication of books and book chapters that were not expected to be completed in the financial year.
KPI 2: New priority patent applications filed	8	5	6	**6**	0	Target was achieved.

SO1: Conduct research, development and innovation of transformative technologies and accelerate their diffusion						
Output indicator	**Audited actual performance 2022/2023**	**Audited actual performance 2023/2024**	**Planned annual target 2024/2025**	**Actual achievement 2024/2025**	**Deviation from planned target to actual achievement 2024/2025**	**Reasons for deviations**
KPI 3: New patents granted	19	16	12	**17**	5	This KPI is beyond the control of the organisation, as granting of patents depends on uncertain prosecution periods in the examining countries.
KPI 4: New technology demonstrators	62	77	49	**61**	12	Several contracts that were uncertain during the planning phase were extended resulting in a larger number of technology demonstrators.
KPI 5: Number of technology license agreements signed	10	13	12	**12**	0	Target was achieved.

Tables 2, 3 and 4 provide a list of new priority patent applications filed, new patents granted and technology license agreements signed during the 2024/25 financial year. For the patent KPIs, the tables indicate the countries in which the patents were filed and granted. For the licencing KPI, the table specifies the technologies licensed and the companies or entities to which the licenses were assigned.

Table 2: List of new priority patents filed in 2024/25

No.	Patent title	Application number	Filing date	Country
1	Chemistry process for the production of cannabinoid compounds	2024/02635	5 April 2024	South Africa
2	Method for integrating a store onto the external surface of an aircraft	2024/05391	11 July 2024	South Africa
3	*E. coli* bacterial diagnostic device	2024/05243	5 July 2024	South Africa
4	Method for accelerated endoderm differentiation of pluripotent stem cells via YAP1 activation	2024/08344	6 November 2024	South Africa
5	Valve system for controlling liquid flow in a microfluidic channel on a lab-on-chip device	2025/01012	31 January 2025	South Africa
6	Production process for metal-organic frameworks	2025/02735	31 March 2025	South Africa

Table 3: New patents granted in 2024/25

No.	Patent title	Patent number	Issue date	Country
1	A field-effect transistor and a gas detector including a plurality of field-effect transistors	130841	18 April 2024	Finland
2	One-pot synthesis method Films for packaging of foodstuffs	10-2671188 ZL201911111856.5	28 May 2024 12 July 2024	Republic of Korea China
3	A gas detection system and method	EP3676597	24 July 2024	European Patent Office (EPO)
4	A laser for real-time generation of high-order, frequency-doubled (second-harmonic) laser modes with polarisation control	3804051	21 August 2024	EPO
5	Polymer-lipid nanocomplex for enhanced aqueous solubilisation and absorption of hydrophobic active compounds	AP 7319	27 May 2024	African Regional Intellectual Property Organisation (ARIPO)
6	A process and method for producing titanium and titanium alloy billets, and spherical and non-spherical powder	764309	3 September 2024	New Zealand
7	Thermo-optic laser beam shaping with doped optical materials	12 061 385	13 August 2024	USA

No.	Patent title	Patent number	Issue date	Country
8	Recycling of multi-layered packaging materials	BR 112021008715-0	22 October 2024	Brazil
9	Recycling of multi-layered packaging materials	554847	22 November 2024	India
10	Thermo-optical control of focus position of an energy beam in an additive manufacturing apparatus	12,157,268	3 December 2024	USA
11	One-Pot synthesis method	7582864	5 November 2024	Japan
12	A biometric hash matching method and system, particularly a fingerprint hash matching method and system	2034476	4 October 2024	Netherlands
13	A method and system for hashing a fingerprint minutia template	2034475	4 October 2024	Netherlands
14	A method and system for contactless fingerprint acquisition	2034473	4 October 2024	Netherlands
15	Plant-produced chimaeric orbivirus virus-like particles (VLPs)	12 215 328	4 February 2025	USA
16	Build platform guiding arrangement for an additive manufacturing apparatus	EP3684593	26 March 2025	EPO
17	A field effect transistor and a gas detector including a plurality of field-effect transistors	130841	18 April 2024	Finland

Table 4: Technology license agreements signed in 2024/25

No.	Licensee	Technology	Date signed
1	Mars Steel (Pty) Ltd	Bulk production of aluminium metal composites (Al MMCs)	24 July 2024
2	Guduza System Technologies (Pty) Ltd	Goafwarn	25 October 2024
3	MycoSure (Pty) Ltd	Mushrooms	6 November 2024
4	Prijab Biolife Biotechnologies (Pty) Ltd	Powder isolates from liquid extracts	8 November 2024
5	Special Vehicle Innovation (Pty) Ltd	Manual turret system	28 October 2024
6	Angula Languages (Pty) Ltd	Qfrency	7 March 2025
7	Nuovi Orizzonti (Pty) Ltd	Indigent Registers and Service Delivery Platform (IRSDP)	20 March 2025
8	3Sixty Biopharmaceuticals (Pty) Ltd	Treatment of malaria	18 March 2025
9	Grace Pharmaceuticals (Pty) Ltd	*L.reuteri* for use as a paediatric or other probiotic	18 March 2025
10	Ziziba Holdings (Pty) Ltd	Single cell protein using fungal cell factories and second-generation feedstock	18 March 2025
11	Molepi Security Group	TMM digital twin	28 March 2025
12	Lumax Energy (Pty) Ltd	Aerolastic design tool	31 March 2025

SO2: IMPROVE THE COMPETITIVENESS OF HIGH-IMPACT INDUSTRIES TO SUPPORT SOUTH AFRICA'S RE-INDUSTRIALISATION BY COLLABORATIVELY DEVELOPING, LOCALISING AND IMPLEMENTING TECHNOLOGY.

In this SO, the CSIR has identified high-impact sectors where South Africa could develop a competitive advantage, targeting specific areas of the economy to stimulate overall socioeconomic growth (see RD&I highlights in Part B above, pages 26-44).

As illustrated in Table 5 below, the CSIR exceeded all targets under this SO in the 2024/25 financial year.

Table 5: KPIs that measure CSIR support to re-industrialisation

SO2: Improve the competitiveness of high-impact industries to support South Africa's re-industrialisation by collaboratively developing, localising and implementing technology						
Output indicator	**Audited actual performance 2022/2023**	**Audited actual performance 2023/2024**	**Planned annual target 2024/2025**	**Actual achievement 2024/2025**	**Deviation from planned target to actual achievement 2024/2025**	**Reasons for deviations**
KPI 6: Number of localised technologies	16	28	13	**31**	18	The over-achievement was due to several factors including an increased maturity of understanding and appreciation of this KPI by clusters, a revision and acceptance of evidence for candidates that were rejected in the prior financial year, as well as the organisation's incentives for increased performance.
KPI 7: Number of joint technology development agreements being implemented for industry	37	42	27	**49**	22	The performance on this KPI was largely due to unplanned opportunities for joint agreements with industry partners being realised, as well as organisational incentives for increased performance.
KPI 8: Number of SMMEs supported	116	170	97	**175**	78	Several programmes that were uncertain at the time of planning were eventually secured.

SO3: DRIVE SOCIOECONOMIC TRANSFORMATION THROUGH RESEARCH, DEVELOPMENT AND INNOVATION THAT SUPPORTS THE DEVELOPMENT OF A CAPABLE STATE.

In this SO, the CSIR measures its ability to support the development of a capable state through science and evidence-based policy development, as well as the implementation of projects on behalf of government and SOEs (see RD&I highlights in Part B above, pages 45-57). This aligns closely with the CSIR's mandate, as the organisation operates in the national interest by supporting government priorities.

As illustrated in Table 6 below, in 2024/25, the CSIR exceeded all the targets under this SO by a significant margin.

Table 6: KPIs that measure CSIR support to government and SOEs

SO3: Drive socioeconomic transformation through research, development and innovation that supports the development of a capable state						
Output indicator	**Audited actual performance 2022/2023**	**Audited actual performance 2023/2024**	**Planned annual target 2024/2025**	**Actual achievement 2024/2025**	**Deviation from planned target to actual achievement 2024/2025**	**Reasons for deviations**
KPI 9: Number of reports contributing to national policy development	14	27	14	**20**	6	Unexpected opportunities for policy work arose from involvement in sector masterplans and participation in national technical working groups.
KPI 10: Number of standards delivered or contributed in support of the state	14	21	9	**28**	19	The performance in this KPI was largely due to a deeper understanding of the KPI definitions and evidence requirements, which led to more standards being approved.

SO3: Drive socioeconomic transformation through research, development and innovation that supports the development of a capable state						
Output indicator	**Audited actual performance 2022/2023**	**Audited actual performance 2023/2024**	**Planned annual target 2024/2025**	**Actual achievement 2024/2025**	**Deviation from planned target to actual achievement 2024/2025**	**Reasons for deviations**
KPI 11: Number of projects implemented to increase the capability of the state	130	184	79	**224**	145	Several factors contributed to the over-achievement of this KPI, including a heightened appreciation of the KPI definitions, cluster incentives and the successful contracting of several programmes from government departments.

SO4: BUILD AND TRANSFORM HUMAN CAPITAL AND INFRASTRUCTURE

This SO focuses on developing a transformed SET base and research infrastructure to provide high-quality scientific and industrial research capabilities that support the economy and a capable state (see Part E below for more details, pages 107-122). The CSIR met or exceeded the KPI targets under this SO.

Table 7: KPIs that measure transformation of CSIR SET staff and investment in research infrastructure

SO4: Build and transform human capital and infrastructure						
Output indicator	**Audited actual performance 2022/2023**	**Audited actual performance 2023/2024**	**Planned annual target 2024/2025**	**Actual achievement 2024/2025**	**Deviation from planned target to actual achievement 2024/2025**	**Reasons for deviations**
KPI 12: Total SET staff	1 555	1 605	1 642	**1 617**	(25)	Target was achieved within threshold.
KPI 13: Percentage of SET staff who are black	70%	72%	69%	**73%**	4%	The growth is attributable to focused appointments of black SET staff and a low turnover rate.
KPI 14: Percentage of SET staff who are female	39%	39%	38%	**40%**	2%	Target was achieved within threshold.
KPI 15: Percentage of SET staff with PhDs	20%	19%	19%	**19%**	0	Target was achieved.
KPI 16: Total chief researchers	15	16	18	**21**	3	The growth is attributed to career ladder promotions and the appointment of two chief researchers through the Capability Investment Development Programme.
KPI 17: Percentage of chief researchers who are black	27%	25%	28%	**29%**	1%	Target was achieved within threshold.
KPI 18: Percentage of chief researchers who are female	20%	19%	28%	**24%**	(4%)	Target was achieved within threshold.
KPI 19: Total principal researchers	195	195	195	**202**	7	Target was achieved within threshold.
KPI 20: Percentage of principal researchers who are black	38%	41%	37%	**41%**	4%	Career ladder promotions of black senior researchers contributed to the increase.

SO4: Build and transform human capital and infrastructure						
Output indicator	**Audited actual performance 2022/2023**	**Audited actual performance 2023/2024**	**Planned annual target 2024/2025**	**Actual achievement 2024/2025**	**Deviation from planned target to actual achievement 2024/2025**	**Reasons for deviations**
KPI 21: Percentage of principal researchers who are female	21%	22%	24%	**23%**	(1%)	Target was achieved within threshold.
KPI 22: Number of staff involved in exchange programmes with industry	42	47	32	**53**	21	Strong and deliberate partnerships with industry and SMMEs have led to increased staff participation in exchange programmes.
KPI 23: PPE investment (Rm)	161.30	263	160	**505**	345	Assets worth R427 million were purchased through grant funding during the financial year.

SO5: DIVERSIFY INCOME AND MAINTAIN FINANCIAL SUSTAINABILITY AND GOOD GOVERNANCE

Income diversification remains a key objective for the CSIR (for more details, see Part G, pages 135-190). The aim is to reduce financial risks associated with significant reliance on public sector income, while also enhancing the CSIR's profitability. As part of its business model, the CSIR aims to increase R&D income from the private sector and actively pursue international opportunities, especially across Africa. Commercialisation and technology transfer efforts will be intensified through CSIR C³, in line with the CSIR's strategic intent, to drive impact and grow royalty and licencing income.

Good governance underpins the CSIR's performance objectives. The organisation remains committed to maintaining an unqualified audit outcome, upholding a strong safety record and preserving its B-BBEE credentials.

The CSIR exceeded the performance targets for three of the KPIs under this SO – namely, total income, net profit and the percentage of contract income from the South African public sector (see Table 8).

The organisation achieved a net profit of R40.62 million, surpassing the targeted loss of R67.6 million by R108.22 million. This represents an increase of R4.15 million compared to the prior financial year, reflecting a significant improvement in financial performance, especially considering the decrease in the CSIR PG allocation for the current financial year when compared to the prior financial year. Total operating income amounted to R3 543.50 million at the end of the financial year, exceeding the target of R3 120.53 million by 14%. Key factors contributing to this revenue performance include:

a. The recognition of income related to grant contracts, which exceeded initial budget expectations. A substantial portion of this income relates to a large-scale infrastructure investment that is fully funded through a dedicated government allocation over a multi-year period.
b. Strong performance in some clusters, which exceeded revenue targets due to the execution of high-impact projects. These initiatives were strategically aligned with national priorities and made a significant contribution to overall income growth.

These positive developments helped offset the reduction in the CSIR's PG allocation.

The contribution of the South African public sector income stream to total income stands at 64%, exceeding the target by 6%.

The South African private sector contributed R244.57 million (7% of total income), which is below the target of R258.23 million. Despite falling short of the target, this represents a R19.57 million (9%) increase compared to the previous financial year. The shortfall stems from lower-than-expected secured sales in this sector. Nevertheless, the year-on-year growth highlights progress in private sector engagement.

The international income stream contributed R356.22 million, representing 10% of total income. This is slightly below the annual target of 11%, however, income from this stream increased by R43.53 million (14%) compared to the previous financial year.

The CSIR has maintained its Level 1 B-BBEE rating following the latest verification period, which was concluded in August 2024.

The recordable incident rate for the current financial year is 0.12, well below the target of less than or equal to 0.4.

The audit for 2024/25 was completed with an unqualified audit report and no significant findings.

Table 8: KPIs that measure CSIR's income diversification, financial sustainability and good governance

SO5: Diversify income and maintain financial sustainability and good governance						
Output indicator	**Audited actual performance 2022/2023**	**Audited actual performance 2023/2024**	**Planned annual target 2024/2025**	**Actual achievement 2024/2025**	**Deviation from planned target to actual achievement 2024/2025**	**Reasons for deviations**
KPI 24: Total income (Rm)	2 861	3 179	3 121	**3 543**	422	Higher conversion of advances held on behalf of customers into revenue, as well as increased revenue generated from grant contracts.
KPI 25: Net profit/ (loss) (Rm)	43.57	36.47	(67.6)	**40.62**	108.22	Higher finance income, along with savings on operating expenses compared to the target.
KPI 26: South African public sector income (% total income)	56%	59%	58%	**64%**	6%	More contracts secured from this sector.
KPI 27: South African private sector income (% total income)	9%	8%	8%	**7%**	(1%)	Despite falling short of the target – due to an increased proportion of South African public sector income – private sector income increased by 9% compared to the previous financial year.
KPI 28: International contract income (% total income)	9%	10%	11%	**10%**	(1%)	Despite falling short of the target – due to an increased proportion of South African public sector income – international income increased by 14% compared to the previous financial year.
KPI 29: B-BBEE rating	1	1	1	**1**	None	Achieved
KPI 30: Recordable incident rate	0	0.09	≤0.4	**0.12**	None	Achieved
KPI 31: Audit opinion	Unqualified audit opinion	Unqualified audit opinion	Unqualified audit opinion	**Unqualified audit opinion**	None	Achieved

Strategy to overcome areas of under performance

The CSIR did not achieve the targeted performance levels for South African private sector and international income as a percentage of total income, primarily due to higher-than-planned public sector income. The CSIR will continue to intensify its income diversification efforts by actively pursuing local private sector and international opportunities.

REVENUE COLLECTION

The CSIR received the full baseline PG allocation for 2024/25. The over-collection reflected in Table 9 relates to projects that commenced in the previous financial year and were completed in the current financial year.

The contract income target was exceeded, as reflected in Table 9. Several factors influenced the total revenue performance.

Revenue from the local public sector was positively impacted by several contracts that contributed to the year's results. In addition, the successful delivery of a major infrastructure asset funded through a government grant in the final quarter of the year enhanced income in this category. This investment is funded through a dedicated multi-year allocation within the national expenditure framework.

International revenue was supported by a combination of late funding approvals and ongoing progress on strategic multilateral initiatives. The early execution of deliverables and the utilisation of prior-year project carryovers further strengthened income recognition in this area.

These positive contributions were critical in offsetting the decline in core government funding due to national budget reductions.

Royalty income exceeded expectations following new licencing agreements and increased earnings from certain existing arrangements. The collection of long-standing debt remains one of the entity's key focus areas and is being closely monitored. This has proven successful, despite the economic strain and delayed payments from customers. Debt older than 30 days consistently decreased, from R88.33 million in March 2024 to R60.22 million in March 2025. Debtors over 90 days declined by R7.7 million, from R49.88 million (March 2024) to R42.18 million (March 2025), and now represent 11.3% of the debtor's book (March 2025), down from 15.2%.

The bad debt provision increased slightly by R0.23 million, from R33.70 million in March 2024 to R33.93 million in March 2025. Debt older than 90 days that has not been provided for has been carefully considered in accordance with IFRS 9, and the CSIR has obtained firm written commitments from customers to settle outstanding balances.

Debt older than 365 days increased from R21.79 million (6.64%) in March 2024 to R24.13 million (6.45%) in March 2025. Of this amount, R7.83 million (32.44%) has been handed over for external debt collection.

Table 9: Sources of revenue generation for the CSIR

	2024/2025			2023/2024		
Sources of revenue	**Estimate**	**Actual amount collected**	**Over collection**	**Estimate**	**Actual amount collected**	**Over collection**
	R'000	**R'000**	**R'000**	**R'000**	**R'000**	**R'000**
PG	679,721	697,120	17,399	714,311	729,724	15,413
Contract income	2,439,267	2,840,489	401,222	2,338,629	2,418,968	80,339
Royalty income	1,916	2,463	547	1,684	1,986	302
Total	**3,120,904**	**3,540,072**	**419,168**	**3,054,624**	**3,150,678**	**96,054**

PROPERTY, PLANT AND EQUIPMENT INVESTMENT

The CSIR targeted an investment of R160 million in property, plant and equipment for the 2024/25 financial year (Table 10). This target was significantly exceeded due to additional grant funding secured and earmarked for investment in capital infrastructure. These grant-funded asset investments amounted to R427.04 million for the year, representing a significant increase from the previous financial year. The investment in the High-Performance Computing System within the National Integrated Cyberinfrastructure System accounted for 64% of the total grant-funded asset investment.

Asset maintenance is prioritised to ensure operational efficiency, reduce risks, maximise the value of investments in assets and support the continued generation of future economic benefits from these assets.

During the financial year, assets with a cost of R31.84 million were disposed of, mainly due to reaching the end of their useful life or being sold. A small percentage were disposed of due to theft (net loss of R0.26 million). The total net loss due to the disposal of assets amounted to R0.09 million. Management prioritises the safeguarding of assets and has implemented a Mobile Asset Management Framework. This framework promotes the effective monitoring of mobile assets and the implementation of necessary controls to maintain their integrity and optimise their use. Asset administration is further governed by the Fixed Assets Policy, which includes the requirements for annual asset verification by asset custodians and the review of the useful life of assets where applicable. The policy also further guides the appropriate actions required to safeguard assets and update their status on the fixed asset register.

Table 10: CSIR targeted investment in property, plant and equipment

	2024/2025			2023/2024		
Asset category	**Budget**	**Actual expenditure**	**Over/(under) expenditure**	**Budget**	**Actual expenditure**	**Over/(under) expenditure**
	R'000	**R'000**	**R'000**	**R'000**	**R'000**	**R'000**
IT equipment	11,885	32,483	20,598	7,200	32,082	24,882
Equipment	31,225	24,330	(6,895)	4,300	23,749	19,449
Buildings	11,000	19,487	8,487	33,200	8,696	(24,504)
Vehicles	1,700	1,006	(694)	2,200	-	(2,200)
Furniture and fixtures	4,150	356	(3,794)	1,100	1,912	812
Total CSIR assets	**59,960**	**77,662**	**17,702**	**48,000**	**66,439**	**18,439**
Grant-funded assets	99,940	427,037	327,097	100,400	196,988	96,588
Total	**159,900**	**504,699**	**344,799**	**148,400**	**263,427**	**115,027**

PART D
GOVERNANCE

INTRODUCTION

Corporate governance encompasses the processes and systems that direct, control, and hold public entities accountable. In addition to legislative requirements derived from an entity's enabling legislation and the Companies Act, 2008 (Act 71 of 2008), corporate governance in public entities is applied through the precepts of the Public Finance Management Act (PFMA), 1999 (Act 1 of 1999) and its associated regulations. These operate in tandem with the principles outlined in the King IV Report on Corporate Governance. While the King IV Report on Corporate Governance is not legally binding, it serves as a benchmark against which the conduct and performance of the CSIR's governance structures are measured. This allows the CSIR to act independently in the best interest of the organisation and in support of its mandate to accelerate socioeconomic prosperity through leading innovation.

Corporate governance is the responsibility of Parliament, the Executive and the Accounting Authority of the public entity.

The CSIR Board, along with its various committees, is responsible for overseeing the implementation of the organisation's mandate through the execution of the annual plan and performance of the organisation. This section provides an overview of the governance systems, processes and controls that have been established to hold the organisation to account.

PORTFOLIO COMMITTEES

The Chairperson of the Board and the CSIR Executive Committee (Exco) hold bilateral meetings with the Executive Authority to ensure that organisational performance is in line with the Shareholder's Compact.

Table 1: CSIR/Parliamentary engagements

Date	Activity	Details	Responsible person/ party
2 April 2024	Tabling of the revised 2023/24 CSIR Shareholder's Compact in the Announcements, Tabling and Committee (ATC) Reports 43 of 2024	Minister of Higher Education, Science, and Innovation	Board and Exco
27 August 2024	Orientation briefing on the programmes, plans, finances, and challenges of the CSIR (Linked to the 2024/25 Shareholder's Compact)	Portfolio Committee on Science, Technology, and Innovation	Board Chair and Exco
26 September 2024	Tabling of the 2023/24 CSIR Annual Report in the ATC 48 of 2024	Minister of Science, Technology, and Innovation	Board and Exco
11 October 2024	Presentation on the 2023/24 CSIR Annual Report	Portfolio Committee on Science, Technology, and Innovation	Exco

AREAS OF RISK FOR THE CSIR AND MITIGATING ACTIONS IMPLEMENTED

The graph below presents the top risks mapped for the organisation during the reporting year and reflects the CSIR's risk profile at year-end.

For each of these risks, the organisation has a defined risk mitigation strategy and risk owner responsible for monitoring and reporting on the progress. These updates are presented to Exco monthly and to the Board Audit and Risk Committee quarterly.

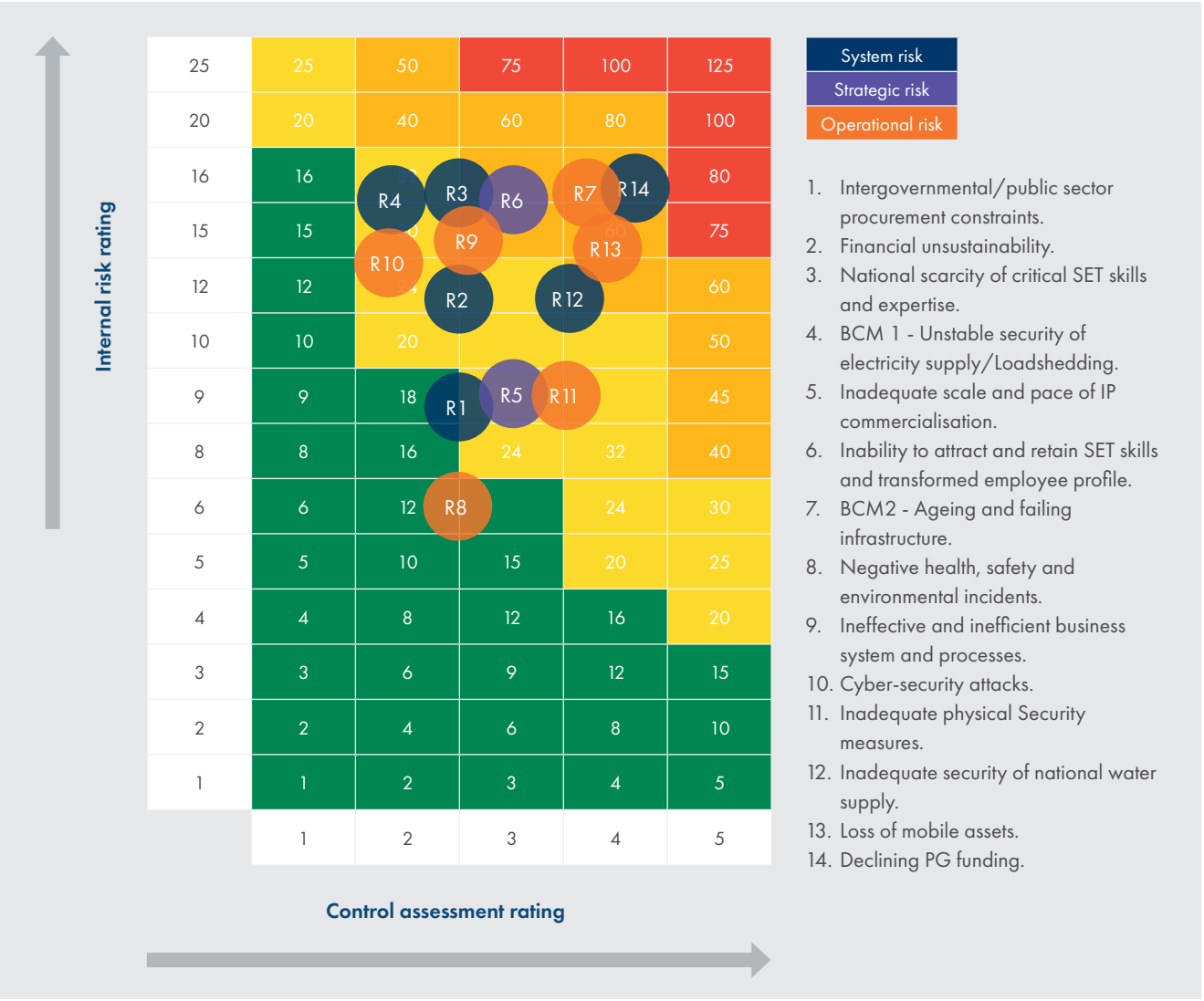
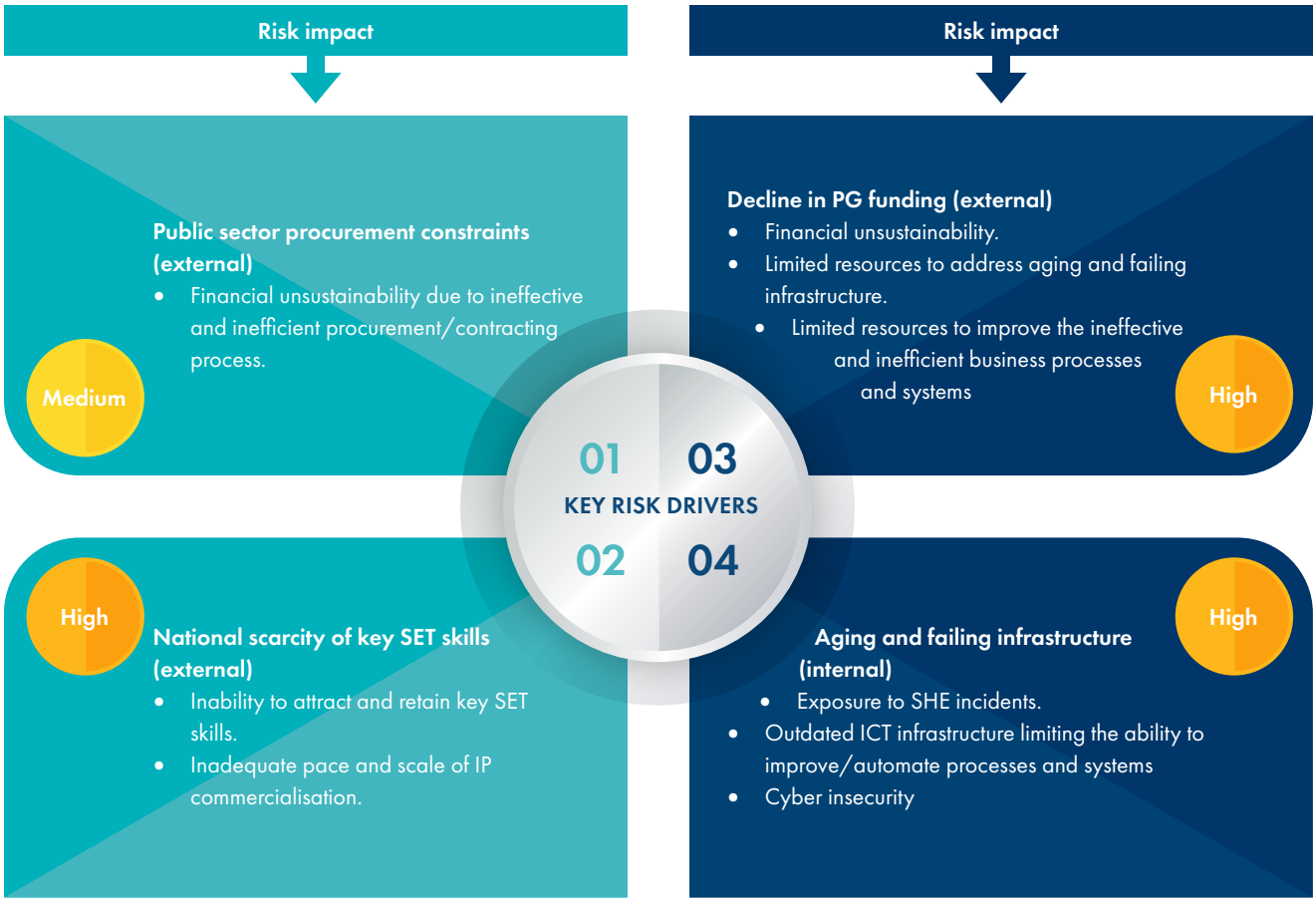


Figure 1: CSIR Risk Heat Map overview (presented quarterly to the Audit and Risk Committee (ARC))

Figure two below provides an overview of top risk drivers and challenges that have affected the CSIR's ability to mitigate risks effectively and efficiently to acceptable levels. Management is concerned about the slow pace of progress in implementing key remedial actions, which has impacted the overall effectiveness of the risk mitigation process. These remedial action plans are medium- to long-term in nature and depend heavily on the availability of resources. The ongoing decline in Parliamentary Grant (PG) funding continues to exacerbate the organisation's ability to mitigate, among other risks, investment in infrastructure, new systems, and technologies and to advance certain research, development, and innovation (RD&I) initiatives. Additionally, the reluctance of state institutions to implement National Treasury Note three on procurement hampers mitigation efforts, particularly in addressing public sector procurement constrains. This results in delays in finalising contracting and collaboration agreements due to cumbersome governance and compliance processes related to deviations and exemptions. While memoranda of understanding (MoUs) and memoranda of agreement (MoAs) are in place with some organisations, these do not always transition smoothly into formal contracts, which affects the commencement of actual project work.

The loss of and/or inability to attract and retain key skill sets hampers some contract work and pipeline projects and revenue due to limited capacity to deliver on commitments. This also affects the organisation's ability to offer certain capabilities and services due to a lack of adequate skills and expertise.

The United States (US) executive order to cut funding aid to South Africa may also be a key risk driver, potentially affecting the sustainability of certain contract work and having a direct negative impact on contract income. This unprecedented development is being monitored, and the impact will be reported by the affected business areas individually.



USAID cut and trade tariffs on SA is being monitored as a key risk driver for financial and projects sustainability.

Figure 2: Overview of key risk drivers for the CSIR

The CSIR is actively monitoring and proactively implementing appropriate mitigation measures to address the following emerging business risks:

- Irregular, fruitless and wasteful expenditure transactions;
- Extreme weather conditions that may impact infrastructure, field projects and other operational activities; and
- The effect of US trade tariffs on future possible CSIR imports and exports.

EXECUTIVE AUTHORITY

Quarterly performance reports are submitted to the Department of Science, Technology and Innovation (DSTI) (the Executive Authority) by the 20th of the month following the end of each quarter (Q). The submission dates were as follows: Q1 Report: 20 July 2024, Q2 Report: 20 October 2024, Q3 Report: 20 January 2025 and Q4 Report: 18 April 2025.

No issues were raised by the Executive Authority.

THE ACCOUNTING AUTHORITY/BOARD

INTRODUCTION

The governance infrastructure of the CSIR comprises a collection of governance operating models – encompassing people, processes, and systems – established to govern the organisation's day-to-day activities.

This infrastructure also includes the processes used to gather and report information to the Board, management, and external stakeholders.

The Board is responsible for oversight across the organisation, including areas such as business and risk strategy, organisational structure, financial soundness, and regulatory compliance.

The CSIR's governance operating model supports the Board in engaging with management to obtain the information necessary for effective governance and risk oversight. It ensures that the appropriate level of oversight is maintained, provides input into policies that shape governance practices and enables active engagement with management to understand governance activities across various levels of the organisation. Additionally, it supports management in efforts to enhance programme efficiency and effectiveness.

The Board Committees are governed by committee charters that define their responsibilities and outline the linkages between each committee, the broader executive team, and the Board of Directors.

The CSIR's organisational design and reporting structure provides a clear and comprehensive organisational structure that defines reporting lines for decision-making, risk management, financial and regulatory reporting, public disclosures and crisis preparedness and response.

The Board of Directors, which serves as the Accounting Authority, is responsible for the preparation and fair presentation of the consolidated and separate financial statements in accordance with International Financial Reporting Standards and the requirements of the PFMA. It is also responsible for implementing internal controls deemed necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error. In preparing the consolidated and separate financial statements, the Accounting Authority is responsible for assessing the organisation's ability to continue as a going concern, disclosing, where applicable, matters related to going concern and applying the going concern basis of accounting.

The role of the Board is as follows:

The responsibilities of the Board are governed by the Scientific Research Council Act, 1988 (Act 46 of 1988) and the PFMA. The Board approves the strategy, goals, operating policies and priorities of the organisation and monitors compliance with policies, applicable legislation, and progress against objectives. Except for the Chief Executive Officer (CEO) of the CSIR, all Board members are non-executive. They are actively involved in Board deliberations and bring independent judgement to bear on decisions. The Board, whose current membership complies with statutory minimum requirements, meets quarterly.

For the year under review, the Board met six times. Meetings were held on 30 May 2024, 18 July 2024, 26 July 2024 (special), 24 October 2024, 6 December 2024 (special) and 13 February 2025. A three-day Board strategy session was held from 28 to 30 October 2024. The annual financial statements for the 2023/24 fiscal year were approved on 26 July 2024. The Board also held various ad hoc meetings to receive updates and provide specific input on matters of strategic importance.

The Board comprises three sub-committees: the Audit and Risk Committee (ARC); the Human Resources and Social and Ethics Committee (HRSEC) and the Research, Development and Innovation Committee (RDIC). These committees are selected according to the skill sets required to fulfil their functions. The Board operates under formal terms of reference set out in the Board Charter, while the Board Committees are governed by their respective charters, which define their roles and responsibilities in an advisory capacity to the Board of Directors.

BOARD CHARTER

The CSIR Board Charter outlines the functions and responsibilities of the Board and addresses matters relevant to its operations. These responsibilities are aligned with the provisions of the Scientific Research Council Act, PFMA and the King IV Report on Corporate Governance.

The CSIR Board of Directors has committed to applying the principles of corporate governance as set out in the Protocol on Corporate Governance in the Public Sector and the King IV Code on Corporate Governance. This commitment aims to regularise and improve corporate governance practices within the CSIR. Accordingly, this Board Charter sets out the CSIR's corporate governance policies as adopted by the Board and must be read in conjunction with the Shareholder's Compact between the CSIR and the Minister of Science, Technology and Innovation.

While the Charter references minimum acceptable standards of governance, it underscores the importance of prioritising substance over form in pursuit of sound governance. The Board is committed to exceeding these standards where reasonable, taking into consideration:

- Recognised governance standards;
- Local and international best practices;
- The recommendations of the King IV Code on Corporate Governance;
- The Protocol on Governance of state-owned entities; and
- The objectives outlined in Section three of the Scientific Research Council Act.

The Board Charter aims to regulate the parameters within which the Board operates and to ensure the consistent application of good corporate governance principles in all actions taken by, on behalf of or in respect of the organisation.

The Board has made considerable progress in complying with the Charter and, in doing so:

- Has guided the continued integration of the CSIR's values and standards of conduct, ensuring that these are adhered to through its input and oversight of the review and re-alignment of all CSIR policies;
- Provides leadership to the CSIR within a framework of prudent and effective controls that enable the assessment and management of risk;
- Reviews the CSIR's direction, strategies, and financial objectives, annually, and ensures that the necessary resources are in place for the CSIR to meet its objectives, while assessing progress on a quarterly basis;
- Oversees and ensures that the performance of CSIR Executive Management, the Board itself and Committees is assessed and monitored regularly; and
- Oversees information technology governance through quarterly engagements on business development, commercialisation and technology innovation through the Research, Development, and Industrialisation Committee and through annual interaction with and reporting by the Research Ethics Committee.

COMPOSITION OF THE BOARD: APRIL 2024 TO MARCH 2025

The members of the CSIR Board are as follows:

- Vuyani Jarana (Chairperson)
- Prof. Arnold van Zyl
- Dr Thulani Dlamini (CEO)
- Jules Newton
- Dr Vuyo Mthethwa
- Dr Christine Render
- Prof. Yunus Ballim
- Maleke Matolong
- Mike Mulcahy
- Michelle Govender
- Mahesh Fakir

COMPOSITION OF THE BOARD

Name	Designation	Date appointed	Date resigned	Qualifications
Vuyani Jarana	Chairperson	January 2023	Active	Stellenbosch University: Masters (Business Administration) Honours (Business Administration) University of Transkei (Walter Sisulu University): BCom (Economics Business Commercial Law) University of South Africa (UNISA): Advanced Executive Programme Olifantsfontein College: Diploma (Telecommunications Institution)
Dr Thulani Dlamini	CEO ex-officio Board Member	2017	Active	University of the Witwatersrand: BSc (Chemistry) BSc Honours (Chemistry) PhD (Chemistry, Catalysis) UNISA: Master of Business Leadership
Prof. Arnold van Zyl	Chairperson of the Research, Development, and Industrialisation Committee	January 2023	Active	University of Cape Town: PhD (Engineering) MSc (Engineering) BSc (Engineering)
Prof. Yunus Ballim		January 2023	Active	University of the Witwatersrand: PhD & MSc (Engineering) BSc (Civil Engineering)
Dr Christine Render		2019	Active	Leeds University (England): PhD (Chemical Engineering) BSc Honours. (Chemical Engineering)
Dr Vuyo Mthethwa	Chairperson of the Human Resources and Social & Ethics Committee	2019	Active	University of KwaZulu-Natal: Doctor of Philosophy (Student Governance) Master of Social Sciences (Industrial and Labour Studies) Bachelor of Social Science (Honours) Bachelor of Social Science Stellenbosch University: Certificate Programme in Labour Dispute Resolution Practice Cum Laude

	Area of expertise	Board directorships	Other committees or task teams	Number of meetings attended
	New sources of growth broadly (digital capabilities, blockchain and internet of things)	Non-Executive Director: ECDC Teconica Telecommunications Executive Director: Ilitha Telecommunications Ilitha Infrastructure Pty Ltd Jarana Investment Holdings Board Member: Cricket South Africa Council Member: Walter Sisulu University Related party company (Spouse) JBV Consulting Agency		Eight
		Council Member: National Advisory Council on Innovation Board Member: Industry Advisory Board of the Faculty of Engineering and Built Environment: University of the Witwatersrand United Nations Development Programme South Africa Tshwane University of Technology Institute for Future of Work Director: Stellar Ventures	ARC RDIC HRSEC	Nine
	Industrial Development / Research New sources of growth broadly (digital capabilities, blockchain and internet of things) Intellectual property management, technology transfer and commercialisation, Scientific development for directed research		ARC RDIC HRSEC	Nine
	Academic representative	Trustee Chair: Gallegher Foundation Trust Council Trustee: Umalusi (Chair)Gallagher Foundation Trust	HRSEC RDIC	Eight
	Industrial Development/ Research New sources of growth broadly (digital capabilities, blockchain and internet of things) Intellectual property management, technology transfer and commercialisation Scientific development for directed research	Partner: Owner Team Consultation Pty (Ltd)	RDIC	Nine
	Human resources	Deputy Vice-Chancellor: People and Operations Durban University of Technology	HRSEC	Eight

COMPOSITION OF THE BOARD *(continued)*

Name	Designation	Date appointed	Date resigned	Qualifications
Mahesh Fakir		January 2023	Active	University of London: MSc (Development Finance) University of Durban – Westville: Master of Business Administration MSc (Civil Engineering) University of Natal: Post Graduate Diploma (Civil Engineering) BSc (Civil Engineering) ML Sultan Technikon: National Diploma (Electrical Engineering) Professional Registration Engineering Council of South Africa Registered Professional – Engineer
Jules Newton		January 2023	Active	University of the Witwatersrand: Bachelor of Arts (Education)
Maleke Matolong		January 2023	Active	North-West University Master of Business Administration BCom (Accounting) UNISA Short learning programme (Project Management) Programme in Entrepreneur and Small Business Management Professional Registrations Southern African Institute of Business Accountant BAP (SA) The Chartered Institute of Government Finance, Audit and Risk Officers Associate member
Mike Mulcahy	Chairperson of the Audit and Risk Committee	July 2023	Active	University of Cape Town Graduate School of Business: MPhil (Development Finance) University of Cape Town Bachelor of Business Science with Honours (Economics
Michelle Govender		January 2023	Active	University of KwaZulu-Natal: BSc (Electrical Engineering) UNISA: Post Graduate Diploma (Applied Risk Management) Professional Certifications Engineering Council of South Africa Professional Engineer Gordon Institute of Business Leaders of Entrepreneurship Networks

	Area of expertise	Board directorships	Other committees or task teams	Number of meetings attended
	Legal and governance	Non-Executive Director: Chairperson: South African Maritime Safety Authority Employee: Technical Expert: National Treasury		Nine
	Social and entrepreneurial skills	Non-Executive Director: Inhlabathi Pty (Ltd) Trustee: Jeppe Trust Executive Director, Shareholder: Newton van Rensburg Properties	HRSEC RDIC	Nine
	Finance	Rustenburg Municipality: Audit Performance Committee	ARC	Nine
	Finance	Non-Executive Director The International Cleantech Network (Chair) Executive Director The Green Cape Sector Development Agency K2024072063 (South Africa) NPC	ARC	Nine
	New sources of growth broadly (digital capabilities, blockchain and internet of things)	Executive Director Octarity Pty (Ltd) (Managing Director and Chief Executive Officer	ARC RDIC	Nine

BOARD COMMITTEES

The CSIR Board has three sub-committees, namely, RD&I Committee, Audit and Risk Committee (ARC) and Human Resources and Social and Ethics Committee (HRSEC). The members of these committees are:

Committee	No. of meetings held	No. of members	Name of members
RD&I Committee	Four	Six	• Prof. Arnold van Zyl (Chairperson) • Mahesh Fakir • Dr Christine Render • Jules Newton • Prof. Yunus Ballim • Michelle Govender
ARC	Four	Four	• Mike Mulcahy (Chairperson) • Prof. Arnold van Zyl • Michelle Govender • Mahesh Fakir (no longer a member effective August 2024) • Maleke Matolong
HRSEC	Four	Four	• Dr Vuyo Mthethwa (Chairperson) • Prof. Yunus Ballim • Jules Newton • Prof. Arnold van Zyl

REMUNERATION OF BOARD MEMBERS

Name	Remuneration	Other re-imbursements	Total
Vuyani Jarana (Chairperson)	R140 974.35	-	R140 974. 35
Prof. Arnold van Zyl	R191 719.00	R7 606.00 (Travel)	R199 325.00
Prof. Yunus Ballim	R138 307.00	R2 006.40 (Travel)	R140 313.40
Dr Christine Render	R126 292.00	R2 666.96 (Travel)	R128 958.96
Dr Vuyo Mthethwa	R158 230.00	-	R158 230.00
Mahesh Fakir	R85 081.50	-	R85 081.50
Jules Newton	R138 307.00	R6 079.52 (Travel)	R144 386.52
Maleke Matolong	R126 292.00	-	R126 292.00
Mike Mulcahy	R138 851.30	-	R138 851.30
Michelle Govender	R142 312.00	R1 428.78 (Travel)	R143 740.78

RISK MANAGEMENT

The Board is responsible for ensuring that a comprehensive and effective system of risk management is in place, including accountability for risk governance. Enterprise risk management at the CSIR is an ongoing process that focuses on identifying, assessing, managing, and monitoring all known forms of risk across the organisation's operations. A structured enterprise risk management approach supports the achievement of the CSIR's goals and objectives, recognising that risks are often interlinked and cannot be managed in isolation. Responsibility for risk management is assigned at appropriate levels across all areas of activity within the organisation to ensure adequate and effective responses.

The CSIR has a Board-approved Risk Management Policy supported by a comprehensive framework. This policy and framework are operationalised through supporting structures, standards, processes, and guidelines.

An annual Risk Management Plan is approved by the Board and published as part of the CSIR Shareholder's Compact. Additionally, an annual Enterprise Risk Management Plan is approved and monitored by the Executive Management Committee to ensure the adequacy and effectiveness of the overall risk management system.

The CSIR Executive empowers the Enterprise Risk Management Services portfolio (a sub-portfolio within the Legal, Compliance and Business Enablement Portfolio) to ensure the effective implementation of the organisation's risk management plans. Additionally, the CSIR Risk Management, Audit and Compliance Committee has been established as a governance structure to support Exco in the establishment and delivery of the organisation's combined assurance strategy.

Quarterly strategic and operational risk assessments are conducted to manage existing business risks effectively and to identify and mitigate emerging risks. These assessments are conducted by line management within clusters, portfolios, strategic projects and key collaboration partnerships or initiatives. The outcomes of these various risk assessments are consolidated to formulate the CSIR Risk Register, commonly referred to as the CSIR Top Risks).

The risk assessment process is structured to analyse and evaluate three key categories:

Systemic risks:

These are risks that originate from macroeconomic and national challenges affecting the National System of Innovation and the National Government Business Enterprise environment in which the CSIR operates.

Strategic risks:

These are risks that directly impact the CSIR's ability to deliver on its mandate.

Operational risks:

These include financial, legal and compliance risks and refer to risks that affect the systems, people, and processes through which the CSIR operates.

The outcomes of the risk assessments are reported through the quarterly CSIR Risk, SHEQ, Legal and Compliance Report. These are reviewed and discussed as a standing agenda item at the quarterly Board ARC meetings, with relevant items noted at Board meetings if required. In addition, current, emerging, and future strategic risks and their management are addressed as part of the agenda during the annual Board strategy sessions.

In support of enhancing the organisation's risk management stance, several key actions were undertaken during the year with the support of the Board, namely:

- The appointment of property valuers to conduct property and asset valuations across all CSIR sites. This strategic initiative was implemented to provide insights into the value of the CSIR's movable and immovable assets. The outcomes are important for the organisation's financial reporting processes, determining replacement values for insurance purpose, establishing market values for potential property sales, and setting leasing values to support the organisation's strategy of improving rental income.
- The renewal of insurance cover was completed, with agreements signed with various insurance companies for the 2025/26 financial year (FY). Management continuously reviews the insurance portfolio to ensure it aligns with the strategic and operational needs of the organisation, as well as with its insurance risk appetite.
- There has been an overall improvement in the visibility of risk management activities within the organisation. This supports the overall organisational objective of embedding a risk-aware culture across all operations and decision-making processes.

Based on the outcomes of internal audit reports, the organisational results achieved, the audit report on the annual financial statements and the Auditor-General's management report, the Board is satisfied that the risk management system was been effective during the year under review.

INTERNAL AUDIT AND AUDIT COMMITTEES

The CSIR has an internal audit function responsible for reviewing the design and operating effectiveness of the organisation's governance, risk, and internal control processes. The CSIR internal audit function reports to the ARC, which is responsible for approving the Internal Audit Charter, the annual audit plan, and the budget to maintain its independence.

The annual audit plan is based on the key risks to the organisation, the outcomes of the enterprise risk assessment conducted by management, as well as specific areas highlighted by senior management, internal audit, and the ARC. In addition, areas identified by the external auditors during internal control reviews are incorporated into the internal audit plan for follow-up.

In line with the PFMA requirements, the internal audit activity assured the ARC and management that the internal controls were appropriate and effective. This was achieved through objective appraisal and evaluation of the risk management processes, internal controls and governance processes, as well as by identifying corrective actions and suggesting enhancements to controls and processes. A comprehensive report on the implementation status of the annual audit plan, key findings identified and the status of resolving the previously reported internal and external audit findings is presented to the ARC quarterly.

The Internal Audit activity is fully supported by management, the Board, and the ARC, and has full, unrestricted access to all organisational activities, records, property, and personnel.

For the period under review, Internal Audit performed an evaluation of the adequacy and effectiveness of controls in the following areas:

- Governance;
- Performance reporting;
- Human capital management and employee wellness;
- Contract income and project management;
- Accounts receivable;
- Property, plant and equipment;
- Supply chain management
- Expenses and accounts payable;
- Supplier contract management;
- Strategic partnership management;
- Contract research and development;
- Privacy;
- Information, communication, and technology general and application controls;
- Laboratories;
- Board of Directors and executives' remuneration and expenses; and
- Follow-up of previous audit findings.

Key activities and objectives of the ARC

The ARC enhances the independence of the Internal Audit activity and provides oversight of risk management, governance, and control processes. The ARC assists the Board in effectively executing its responsibilities, thereby supporting achievement of the CSIR's objectives. The ARC continues to function and met four times during the period under review. It is responsible for improving the operations of the organisation by overseeing the audit functions, internal controls, and financial reporting process.

The ARC assists the CSIR to:

- Create and maintain an effective internal control environment, financial controls, accounting systems and reporting;
- Address all matters prescribed by the regulations issued under the PFMA and the Scientific Research Council Act;
- Identify material risks and ensure their management;
- Agree on the scope and review the annual external audit plan and the work of the CSIR's internal auditors;
- Review and approve the Internal Audit Charter, the three-year risk-based strategic internal audit plan, and the annual audit plan;
- Act independently to understand the dynamics and performance of the organisation without restrictions;
- Ensure the CSIR can prevent, detect, and respond to fraud and allegations of fraud; and
- Discharge its responsibilities relating to:
  - safeguarding of assets;
  - operation of adequate procedures and controls;
  - reviewing financial information and the preparation of the financial statements; and
  - attendance of ARC meetings by its members.

The table below discloses relevant information on the Audit and Risk Committee members

Name	Qualifications	Internal or external	If internal, position in the public entity	Date appointed	Date resigned	No. of meetings attended
Mike Mulcahy (Chairperson)	University of Cape Town Graduate School of Business: MPhil (Development Finance) University of Cape Town: Bachelor of Business Science with Honours in economics	External	N/A	2023		Four
Prof. Arnold van Zyl	University of Cape Town: PhD (Engineering) MSc (Engineering) BSc (Engineering) University of the Witwatersrand: PhD MSc (Engineering) BSc (Civil Engineering)	External	N/A	2023		Four
Michelle Govender	University of KwaZulu-Natal: BSc (Electrical Engineering) University of South Africa: Post Graduate Diploma: Applied Risk Management Professional Certifications Engineering Council of South Africa Professional Engineer Gordon Institute of Business Leaders of Entrepreneurship Networks	External	N/A	2023		Four

Name	Qualifications	Internal or external	If internal, position in the public entity	Date appointed	Date resigned	No. of meetings attended
Mahesh Fakir	University of London: MSc (Development Finance) University of Durban – Westville: Master of Business Administration MSc (Civil Engineering) University of Natal: Post Graduate Diploma (Civil Engineering) BSc (Civil Engineering) ML Sultan Technikon: National Diploma (Electrical Engineering) Professional Registration Engineering Council of South Africa Registered Professional – Engineer	External	N/A	2023	August 2024	Two
Maleke Matolong	University of North West: Master of Business Administration BCom Accounting University of South Africa: Short learning programme (Project Management) Programme in Entrepreneur and Small Business Management Professional Registrations Southern African Institute of Business Accountant BAP (SA) The Chartered Institute of Government Finance, Audit and Risk Officers Associate member	External	N/A	2023		Four

COMPLIANCE WITH LAWS AND REGULATIONS

As a state-owned entity committed to RD&I, the CSIR remains fully aligned with the principles of good governance, accountability, and legal compliance. Its operations are conducted within the framework of national and sector-specific legislation, as well as international best practices governing public entities and scientific research.

During the 2024/25 financial year, the CSIR undertook various initiatives to ensure full compliance with all applicable laws and regulations, including, but not limited to:

- Scientific Research Council Act;
- PFMA and associated Treasury Regulations;

- Preferential Procurement Framework Act and Public Procurement Regulations (as amended);
- Intellectual Property Rights from Publicly Financed Research and Development Act;
- Occupational Health and Safety Act;
- Protection of Personal Information Act; and
- Other prioritised legislation applicable to the CSIR's RD&I activities.

Additional legislation assessed for future impact on the CSIR included:

- Public Procurement Act;
- Climate Change Act; and
- National State Enterprises Bill.

Key compliance highlights for the year included:

- No material findings were issued by internal or external audit in relation to non-compliance with laws and regulations;
- All statutory submissions and returns were made timeously;
- All legal compliance registers are maintained and reviewed quarterly by the Risk and Compliance functions;
- The organisation continues to build internal capacity to ensure compliance with emerging regulations in data protection, ethical research, and intellectual property management; and
- Training and awareness programmes were conducted across various functions to promote compliance culture, particularly in areas such as research ethics, procurement, and data governance.

The Board and Executive Management remain committed to upholding the highest standards of integrity and transparency, ensuring that the CSIR not only complies with legal obligations but also demonstrates leadership in ethical and responsible RD&I practices.

FRAUD AND CORRUPTION

The CSIR remains committed to upholding the highest standards of integrity, transparency and accountability across all areas of its operations, particularly in the context of RD&I. Fraud prevention is a key component of the enterprise risk management framework and the CSIR has implemented proactive measures to mitigate the risks of fraud, corruption and unethical conduct.

The CSIR Fraud Prevention and Management Policy and Fraud Prevention Plan (FPP) have been developed in compliance with section 3.2.1 of the Treasury Regulations under the PFMA. The plan is reviewed annually to ensure its relevance to the evolving RD&I landscape, with particular focus on risks associated with:

- Misuse of research funds and grants;
- Research integrity breaches, manipulation of research data or intellectual property theft;
- Irregular procurement practices;
- Conflict of interest in innovation partnerships; and
- Other forms of risks prevalent in the operations of the CSIR.

Key measures implemented under the FPP to safeguard the activities of the CSIR include:

- Conducting fraud risk assessments as part of the enterprise risk assessment process;
- Providing guidance through the CSIR's Ethics Statement and Code of Conduct on expected standards of business ethics and the reporting of unethical behavior and fraud;
- Maintaining a confidential Fraud and Ethics Hotline, independently managed by an external service provider, available to all stakeholders to report fraud, corruption, or unethical conduct;
- Offering ongoing awareness and training initiatives to educate staff and researchers on fraud risks, prevention strategies and reporting mechanisms;
- Implementing internal controls across procurement, payroll, finance, and key activities to detect and deter fraudulent activity; and
- To support a culture of enforcement by promptly investigating all reported allegations of fraud and applying appropriate disciplinary, civil, or criminal action where warranted.

Monitoring and oversight of the fraud prevention framework are exercised by the HRSEC, with regular reporting to the Board. The Internal Audit function also provides assurance on the adequacy and effectiveness of controls related to fraud risk. The CSIR continues to cultivate a culture of integrity and ethical research conduct, recognising that fraud prevention is critical not only for compliance but also for maintaining trust in public research and innovation systems.

MINIMISING CONFLICT OF INTEREST

Board members and CSIR employees (internal stakeholders) must not place themselves in a position in which their personal interest's conflict, or may potentially conflict, with their duty to act in the best interests of the CSIR. This obligation gives rise to the following duties:

- To act bona fide in the interests of the CSIR;
- Not to compete improperly with the CSIR; and
- For Board members, to disclose any direct or indirect personal or private interests, as envisaged in section 50(3)(a) of the PFMA, with such disclosures duly recorded in the meeting minutes. CSIR employees must also disclose direct or indirect personal or private interests, fulfilling their common law duty to act in good faith and in the best interests of their employer.

Board members are required to inform the Board, through the Board Secretary, in advance of any conflicts or potential conflicts of interest relating to items of business to be transacted at a meeting. Equally, CSIR employees must disclose any interests they hold in any organisation, whether or not that organisation conducts business with the CSIR. This duty to disclose applies upon joining the CSIR and must be updated as circumstances change or positions arise that could pose a conflict of interest.

For the CSIR Board, declarations are managed by the Company Secretariat function; for CSIR employees, they are managed by the Human Capital Development function.

Board members may not vote on, and must not be counted in the quorum for, any resolution concerning a matter in which they have a direct or indirect interest.

If a Board member wilfully or negligently fails to disclose an interest as required or participates in Board proceedings despite a conflict, the relevant proceedings may, at the discretion of the other Board members, be declared null and void.

In exceptional circumstances, the Board may decide that, in the light of interests disclosed by a Board member, the member will not be entitled to receive further information on the matter before the Board and will instruct the Board Secretary accordingly. A Board member aggrieved by such a decision may make representations to the Board, which will refer the matter to an independent governance expert. The expert's decision will be final and binding on all parties.

CODE OF CONDUCT

The Board and the CSIR Executive Management have approved and adopted the Ethics Statement and Code of Conduct, reflecting their commitment to fair dealing and integrity in all operations. The Code has been significantly restated to ensure close alignment with the CSIR's values, compliance to laws and regulations and the expectation that all employees uphold the highest ethical standards, conducting business in a manner that is beyond reproach. An Ethics Hotline has been established to facilitate the anonymous reporting of ethical transgressions.

The CSIR actively promotes the application of the Code each year through various awareness activities and commemorates International Ethics Week annually in October as part of this programme. During the year under review, the CSIR collaborated with the Ethics Institute of South Africa and the independent hotline service provider to raise awareness on issues of ethical conduct, emerging trends in fraud and corruption and the significant role different stakeholders play in safeguarding the CSIR's interests and reputation.

HEALTH, SAFETY AND ENVIRONMENTAL ISSUES

The CSIR is committed to upholding the highest standards of responsibility for safety, health and environmental (SHE) matters. A dedicated and capacitated SHE portfolio ensures diligence and accountability in these areas. The mandate of this portfolio is to:

- Achieve zero harm by establishing and maintaining a safe, healthy, and environmentally sustainable working environment across all CSIR operations;
- Maintain certification against international standards for SHE systems;
- Comply with relevant legislative requirements while fostering a culture of compliance and excellence;
- Continuously engage with key internal and external stakeholders on SHE requirements and performance; and
- Establish and embed a mature, integrated SHE Management System.

The CSIR is committed to achieving a state of zero harm for its community and the areas in which it operates, through the sustainable advancement and continual improvement of SHE practices. To foster a positive SHE culture, the CSIR implements key initiatives and ensures compliance with all applicable legislative and other requirements.

The CSIR's SHE objectives include:

- Creating a safe and healthy work environment;
- Achieving zero harm as per policy directive;
- Preventing the spread of transmittable diseases or infections in the workplace;
- Demonstrating care for the health and wellbeing of employees, tenants, contractors, and visitors;
- Providing leadership in SHE matters within the CSIR community;
- Promoting the responsible use and conservation of natural resources;
- Implementing a carbon and energy management system;
- Establishing an integrated SHE management system within the CSIR; and
- Complying with strategic legislative and best practice standards.

BOARD SECRETARY

The responsibilities of the Board Secretary include:

- Providing the Board and individual Board members with guidance on the nature and extent of their duties and responsibilities, and how these must be properly discharged in the best interests of the CSIR and the shareholder;
- Ensuring the induction of new and inexperienced Board members and, together with the Chairperson, developing mechanisms for the ongoing education and training of all Board members to improve and maintain the Board's effectiveness;
- Assisting the Chairperson in determining the Annual Calendar, Annual Board Plan and addressing other administrative matters; and
- Serving as a central source of guidance and advice to the Board on matters of business ethics and good governance. The appointment of the Board Secretary is subject to the same 'fit and proper' test as that applied to new Board members.

SOCIAL RESPONSIBILITY

As part of its social responsibility, the CSIR implemented its corporate social investment programme under three pillars: education and skills development, socioeconomic development and employee volunteerism. The summary below outlines the CSIR's achievements in corporate social investment during the reporting period.

EDUCATION AND SKILLS DEVELOPMENT

The CSIR supported six Corporate Social Investment beneficiary schools in provinces where it has regional offices. The schools are Sikhululekile School of Specialisation, Mamelodi Secondary School and Silverton Hoërskool in Pretoria; Chesterville High School in Durban; Sinethezekile High School in Jozini and Kayamanda Secondary School in Stellenbosch. Support provided to the schools included upgrading facilities such as laboratories and libraries and donating teaching and learning materials, such as books, computers, chemistry equipment and resources for science, technology, engineering, mathematics and innovation (STEMI) engagements. A total of 4 145 learners from grades 8 to 12 were reached through STEMI engagements during the 2024/25 financial year. Additionally, six students from CSIR beneficiary schools were awarded bursaries to pursue studies in science, engineering and technology at South African public universities.

As part of the CSIR Road Race held in October 2024, a CSIR Career Expo was incorporated to enable the participation from schools in the 5 km race and to showcase career opportunities within the CSIR. The CSIR Career Expo and the CSIR Road Race were held at the CSIR Pretoria campus. The exhibition comprised 14 exhibitions, including the CSIR, the City of Tshwane, Ditsong, TeachSA, the University of South Africa and the Department of Public Works and Infrastructure. A total of 96 learners, eight teachers and 106 CSIR employees participated in the activities planned for the Career Expo.

SOCIOECONOMIC DEVELOPMENT

The CSIR implemented the Entrepreneurship Development Programme in partnerships with the National Mentorship Movement and the Industrial Development Corporation to support the skills development of aspiring young entrepreneurs, particularly from previously disadvantaged communities. A total of 22 entrepreneurs completed the programme and 50 CSIR alumni volunteered as mentors over a nine-month period. Three entrepreneurs secured funding deals of just above R3 million during a pitching session held at the CSIR. The programme also contributed to the CSIR's Broad-based Black Economic Empowerment score by converting employee volunteerism hours into monetary value.

EMPLOYEE VOLUNTEERISM

The CSIR Employee Volunteerism Guideline was approved. The guideline aims to guide CSIR employees in participating in employee volunteerism. Over this period, approximately 90 employees participated in CSIR employee volunteerism initiatives. Activities undertaken include career guidance, demonstration of various technologies and participation in activities such as painting, cleaning and upgrading facilities at schools supported by the CSIR.

AUDIT COMMITTEE REPORT

We are pleased to present our report for the financial year ended 31 March 2025.

AUDIT AND RISK COMMITTEE RESPONSIBILITY

The Audit and Risk Committee reports that it has complied with its responsibilities arising from Section 77 of the Public Finance Management Act and Treasury Regulation 3.1.13. The Committee also reports that it has adopted appropriate formal Terms of Reference as its Charter, as approved by the Board. Accordingly, the Committee has regulated its affairs in compliance with this Charter and has discharged all its responsibilities as contained therein.

COMMITTEE MEMBERS AND ATTENDANCE

The Audit and Risk Committee consist of members as stated in the Committees summary on page 96 of this report. In terms of its Terms of Reference, the Committee convened at least four meetings for the period under review. The key activities and objectives of the ARC, the member details and number and member attendance of meetings are noted on pages 98 – 100 of the report.

The CEO, the executive management, and representatives of internal and external auditors attended committee meetings by invitation. The Committee also periodically meets separately with internal and external auditors. The internal and external auditors have unrestricted access to the Committee.

THE EFFECTIVENESS OF INTERNAL CONTROL

The system of internal control that the CSIR applies over financial risk management is effective, efficient and transparent. In line with the Public Finance Management Act and King IV report, the Internal Audit function provides the Committee and management with assurance that the internal controls are appropriate and effective. This is achieved by means of the risk management process, as well as the identification of mitigating measures and an ongoing assessment thereof.

The following internal audit work was completed during the year under review:

- Governance;
- Performance reporting;
- Human capital management & Employee wellness;
- Accounts receivable;
- Property plant and equipment;
- Supply chain management
- Expenses and Accounts payable;
- Supplier contract management;
- Strategic partnership management;
- Contract research and development;
- Privacy;
- Laboratories;
- Board of Directors and executives' remuneration and expenses; and
- Follow-up of previous audit findings.

From the reports of Internal Audit, the audit report on the annual financial statements and the management report of the Auditor-General of South-Africa, it was noted that no matters that include any material deficiencies in the system of internal control or any deviations therefrom were reported. Accordingly, the Committee can report that the system of risk management and internal control over financial reporting for the period under review was efficient and effective.

IN-YEAR MANAGEMENT AND QUARTERLY REPORTS

The Committee has noted and is satisfied with the content and quality of the reports prepared and issued by the CSIR during the year under review.

EVALUATION OF FINANCIAL STATEMENTS

We have reviewed the annual financial statements prepared by the CSIR for the year ended 31 March 2025. Based on the information provided, the Committee considers that it complies, in all material respects, with the requirements of the various Acts governing disclosure and reporting on the annual financial statements.

AUDITOR'S REPORT

We have reviewed the entity's implementation plan for audit issues raised in the prior year and we are satisfied that the matters have been adequately resolved.

The Audit and Risk Committee concurs with and accepts the conclusions of the external auditor on the annual financial statements and is of the opinion that the audited annual financial statements should be accepted and read together with the report of the auditor.

Mike Mulcahy
Chairperson of the Audit and Risk Committee
CSIR
31 July 2025

B-BBEE COMPLIANCE PERFORMANCE INFORMATION

The table below illustrates how the CSIR's broad-based black economic empowerment (B-BBEE) governance activities align with the objectives of the Broad-Based Black Economic Empowerment Act, 2003 (Act 53 of 2013), as determined by the Department of Trade, Industry and Competition.

Has the department/public entity applied any relevant Code of Good Practice (B-BBEE Certificate Levels 1 – 8) with regard to the following:		
Criteria	**Response Yes/No**	**Discussion**
Determining qualification criteria for the issuing of licenses, concessions, or other authorisations in respect of economic activity in terms of any law	No	The CSIR does not issue licenses, concessions or authorisations permitting economic activity under any law. This function typically applies to entities responsible for issuing trade licenses, mining, or exploration licenses, among others.
Developing and implementing a preferential procurement policy	Yes	The CSIR has developed and implemented a Procurement Policy that incorporates preferential procurement, together with various templates, evaluation criteria, frameworks and so forth to ensure compliance. This is monitored regularly.
Determining qualification criteria for the sale of state-owned enterprises	No	While the CSIR generally does not engage in the sale of assets or technologies, where such sales do occur, specific criteria are developed on a case-by-case basis. These criteria are designed to align with the nature of the asset or technology, the CSIR's mandate and the goal of securing sustainable offerings in the interest of South Africa.
Developing criteria for entering into partnerships with the private sector	No	Specific criteria for collaboration initiatives are developed on a case-by-case basis to align with the CSIR's mandate to secure sustainable technology commercialisation in South Africa. In these instances, where the opportunity allows for feasible and sustainable commercialisation through small, medium, and micro-enterprises, criteria such as B-BBEE levels or status may be included. There is no firm policy on this as the nature of the technology and available markets would determine the feasibility of such criteria.
Determining criteria for the awarding of incentives, grants, and investment schemes in support of B-BBEE	No	The awarding of grants, incentives and investments is not a core activity of the CSIR, and it does not make material investments in this context, excepting the case of the Youth Employment Service Programme applications, bursary awards and corporate social investment initiatives.

PART E
HUMAN CAPITAL

INTRODUCTION

The CSIR recognises the significance of a skilled workforce in fulfilling its mandate and advancing national strategic objectives. As a result, it prioritises the development of its staff in science, engineering and technology (SET) fields. This investment aims to build a diverse and innovative talent pool capable of addressing South Africa's socioeconomic challenges through research and technological advancements. By equipping its workforce to contribute to national priorities, the CSIR plays a crucial role in supporting the country's sustainable development and long-term prosperity.

Over the past year, our organisation has made significant progress across various areas, reflecting its commitment to excellence and growth. The Youth Employment Service (YES) Programme was successfully implemented, supporting 65 youths and contributing positively to efforts to reduce youth unemployment. The programme also enhanced the CSIR's overall Broad-Based Black Economic Empowerment status. Additionally, 20 entrepreneurs completed the Entrepreneurship Development Programme, implemented in partnership with the Industrial Development Corporation and the National Mentorship Movement.

Continuing with human capital (HC) development, we have awarded 24 bursaries to date to learners from the CSIR Corporate Social Investment (CSI) beneficiary schools for tertiary studies in disciplines aligned with our strategic focus areas. A new partnership was established with the Sasol Foundation to support undergraduate students, with a memorandum of understanding (MoU) signed for a three-year period. Strategic partnerships also enabled the CSIR to leverage over R58 million in funding from various entities. The Staff Dependents Bursary Programme was successfully launched, supporting 152 staff dependents.

In talent management, we enhanced our sourcing strategies by strengthening partnerships with external stakeholders, thereby broadening the reach and visibility of CSIR vacancies. We also improved turnaround times for filling executive and senior management positions, reducing our reliance on external recruitment agencies. Succession plans for key positions were finalised and approved, and the Mentorship Train-the-Trainer initiative successfully trained over 130 internal staff members.

Our rewards and recognition efforts included the approval and implementation of short-term incentive payments and annual cost-of-living salary adjustments. The CSIR Excellence Awards recognised 80 employees out of 183 shortlisted candidates.

In the area of employee relations and transformation, the CSIR was certified as compliant with the Employment Equity Act (EEA), and a new five-year Employment Equity Plan was submitted to the Department of Employment and Labour (DoEL) and approved. The Employee Relations and Transformation Capability Building Initiative continued in the 2024/25 financial year (FY), with participation increasing by 105% compared to the previous FY.

Organisational behaviour and wellness achievements included hosting Wellness Day events across all regional offices, increased participation in mental health and wellbeing webinars, and the successful hosting of the CSIR Road Race and Golf Charity Day events, which enhanced corporate engagement.

STAFF AND TRANSFORMATION PROFILE

TOTAL STAFF PROFILE (2 298)

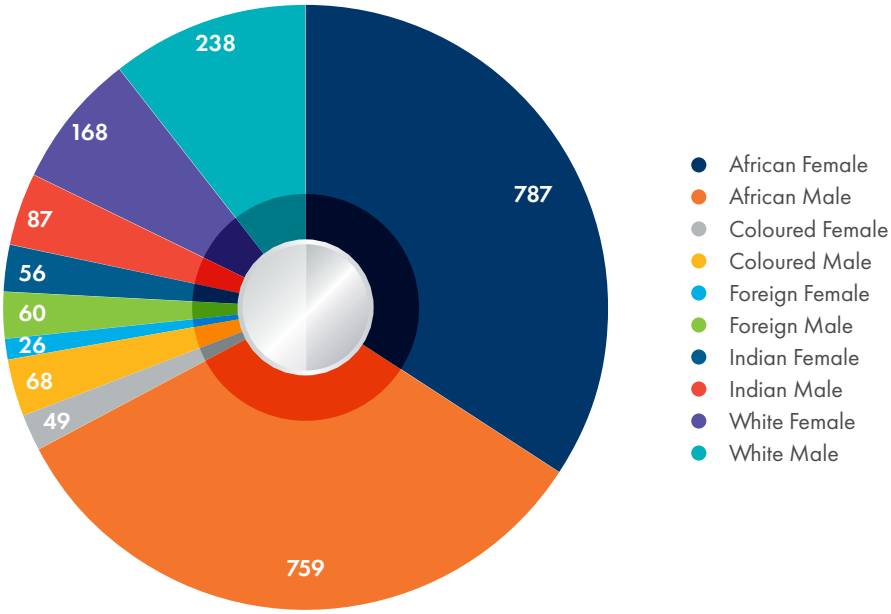


Figure 1: Staff profile

As of the end of the 2024/25 FY, the CSIR's total staff headcount stood at 2 298, reflecting an increase of 27 from 2 271 in the previous FY. Of this total, 1 617 employees (70%) occupy SET roles, while 681 (30%) are in support positions. The demographic breakdown includes 1 806 (79%) black South Africans and 1 060 (46%) female South Africans.

Table 1: CSIR staff profile as at 31 March 2025

Staff category	SET staff	SET staff as % of category total	Support staff	Support staff as % of category total	Total	Staff category as % of grand total
Permanent	1 389	71.2%	562	28.8%	**1 951**	84.9%
Temporary*	78	78.8%	21	21.2%	**99**	4.3%
Pipeline: studentships	27	92.9%	0	7.1%	**27**	1.2%
Pipeline: GITs	13	66.4%	1	33.6%	**14**	0.6%
Pipeline: interns	81	100.0%	41	0.0%	**122**	5.3%
Pipeline: post doctorate	12	100.0%	0	0.0%	**12**	0.5%
Pipeline: YES programme	16	12.5%	49	87.5%	**65**	2.8%
Pipeline: WIL students	1	24.6%	7	75.4%	**8**	0.4%
Grand total	**1 617**	**70.4%**	**681**	**29.6%**	**2 298**	**100%**

** Staff contracts less than 12 months*

SET AND SUPPORT STAFF PROFILE

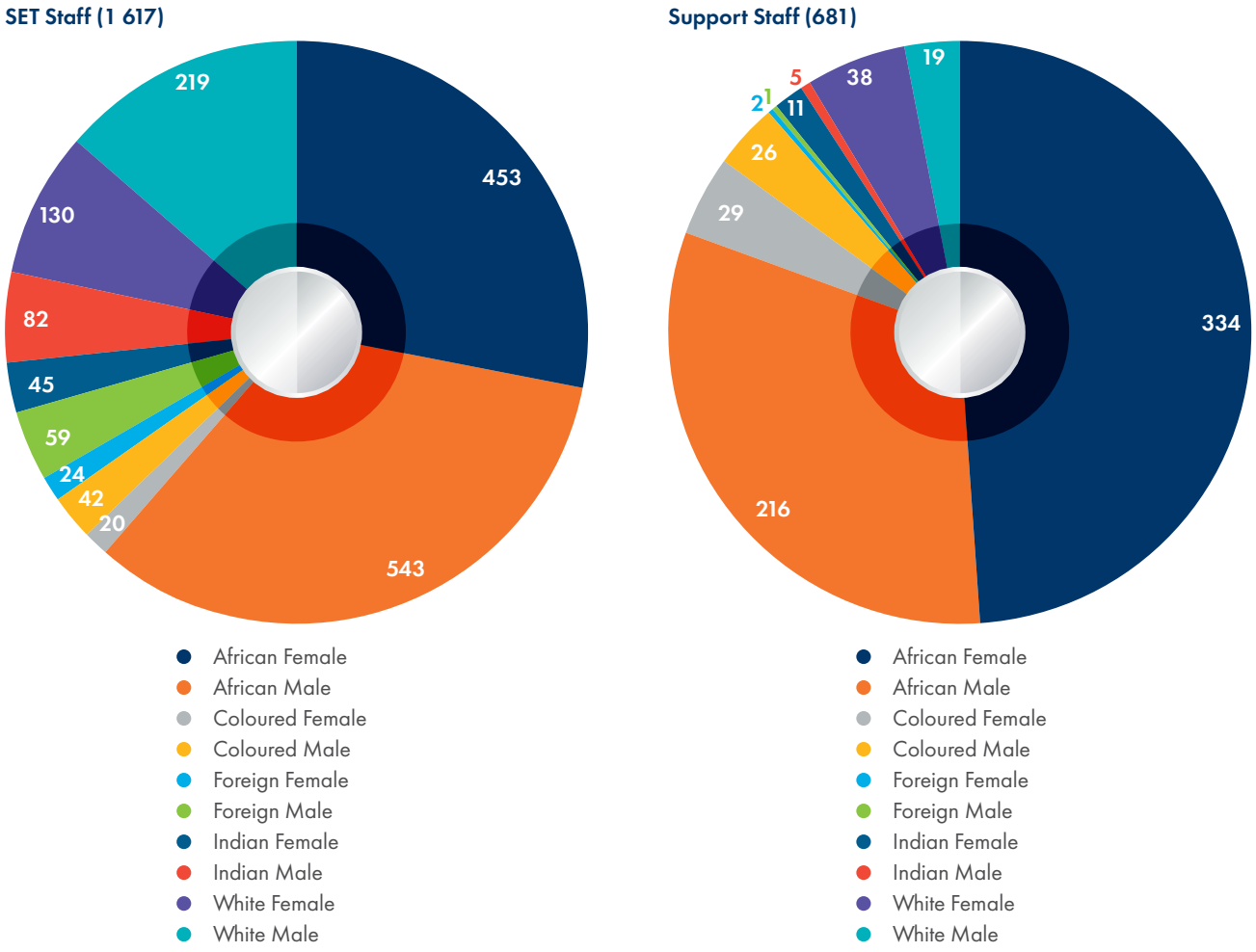


Figure 2: SET and support staff profile

CSIR EMPLOYMENT EQUITY PERFORMANCE AGAINST NEAP TARGETS

As of 31 March 2025, the CSIR's employment equity performance against the National Economically Active Population (NEAP) targets shows an 8.2% increase in the representation of black South Africans compared to the 2020/21 FY. Notably, there has been significant progress in the representation of black South African females over the past five years, with a gap between actual performance and NEAP targets narrowing from -7.1% to only -1.6% in the 2024/25 FY.

Table 2: Performance against NEAP targets

Performance	AM	AF	CM	CF	IM	IF	WM	WF	Total SA	FM	FF	Total foreign	Grand total
Target %	42.7	35.8	5.2	4.4	1.7	1.1	5.1	4	**100**	0	0	**0**	**100**
FY20/21 Average %	29	28.7	2.9	2.4	4.5	2.9	14.5	10.2	**95.1**	3.9	1	**4.9**	**100**
FY21/22 Average %	30.7	31.6	3	2.2	4.3	2.7	12.5	8.7	**95.7**	3.4	0.9	**4.3**	**100**
FY22/23 Average %	32.1	32.1	3	2	4.4	2.5	11.5	8.4	**96**	3	1	**4**	**100**
FY23/24 Average %	32.9	32.8	3	1.8	4.2	2.7	10.8	7.8	**96**	3	1	**4**	**100**

Performance	AM	AF	CM	CF	IM	IF	WM	WF	Total SA	FM	FF	Total foreign	Grand total
FY24/25 Average %	33.0	34.2	3.0	2.1	3.9	2.4	10.4	7.3	**96.3**	2.6	1.1	**3.7**	**100**
GAP % (FY24/25 Ave vs Target %)	-9.7	-1.6	-2.2	-2.3	2.2	1.3	5.3	3.3	**-3.7**	2.6	1.1	**3.7**	**0**

NUMBER OF STAFF WITH DISABILITIES

The CSIR continues to exceed its target for the employment of people with disabilities. As of the end of March 2025, the CSIR employed 63 staff members with disabilities, representing 2.7% of the total workforce - surpassing the organisation's minimum target of 2%.

A summary of the number of staff with disabilities by occupational category is provided in the table below.

Table 3: Staff with disability by occupational level

Occupational level	AM	CM	IM	WM	AF	CF	IF	WF	FM	Total	Total staff	% of total staff
Top management	0	0	0	0	0	0	0	0	0	**0**	**19**	0.00%
Senior management	0	0	0	1	0	0	0	1	0	**2**	**106**	0.09%
Middle management	2	0	0	4	0	0	1	1	1	**9**	**870**	0.39%
Skilled	1	0	2	3	2	0	0	1	0	**9**	**989**	0.39%
Semi-skilled	0	0	0	0	0	0	0	0	0	**0**	**214**	0.00%
Unskilled	9	5	0	0	23	6	0	0	0	**43**	**100**	1.87%
Total	**12**	**5**	**2**	**8**	**25**	**6**	**1**	**3**	**1**	**63**	**2 298**	**2.7%**

STAFF MOVEMENTS

Appointments

From 1 April 2024 to 31 March 2025, a total of 315 employees were appointed, including 214 temporary employees. Of these appointments, 292 (93%) were black South Africans and 176 (56%) were female South Africans. This total includes 101 permanent appointments, of which 91 (90%) were black South Africans and 44 (44%) were female South Africans. Furthermore, of the permanent appointments, 70 (69%) were in SET roles and 31 (31%) in support positions for the 2024/25 FY.

Table 4: Appointments by occupational level

Occupational level	AM	AF	CM	CF	IM	IF	WM	WF	Total (SA)	FM	FF	Total (foreign)	Grand total
Top management	0	0	0	0	0	0	0	0	**0**	0	0	**0**	**0**
Senior management	3	1	0	0	0	0	1	0	**5**	0	0	**0**	**5**
Middle management	20	9	0	2	0	0	0	3	**34**	1	0	**1**	**35**
Skilled	14	21	1	1	0	1	4	1	**43**	0	0	**0**	**43**
Semi-skilled	11	2	0	1	0	0	0	0	**14**	0	0	**0**	**14**
Unskilled	2	2	0	0	0	0	0	0	**4**	0	0	**0**	**4**
Total permanent	**50**	**35**	**1**	**4**	**0**	**1**	**5**	**4**	**100**	**1**	**0**	**1**	**101**
Fixed-term contracts*	10	11	0	0	1	2	6	4	**34**	0	0	**0**	**34**
Pipeline: studentship	1	2	0	0	0	0	0	0	**3**	0	0	**0**	**3**
Pipeline: Graduates-In-Training (GIT)	2	4	0	0	0	0	1	0	**7**	0	0	**0**	**7**
Pipeline: internships	29	58	0	1	0	2	0	0	**90**	0	0	**0**	**90**

Occupational level	AM	AF	CM	CF	IM	IF	WM	WF	Total (SA)	FM	FF	Total (foreign)	Grand total
Pipeline: post doctorate	0	3	0	0	0	0	0	0	**3**	0	2	**2**	**5**
Pipeline: YES programme	18	36	5	7	0	0	0	0	**66**	0	0	**0**	**66**
Pipeline: Work Integrated Learning (WIL) students	7	2	0	0	0	0	0	0	**9**	0	0	**0**	**9**
Total temporary	**67**	**116**	**5**	**8**	**1**	**4**	**7**	**4**	**212**	**0**	**2**	**2**	**214**
Grand-total	**117**	**151**	**6**	**12**	**1**	**5**	**12**	**8**	**312**	**1**	**2**	**3**	**315**

** Staff contracts less than 12 months*

CSIR staff exits

In the 2024/25 FY, a total of 313 employees exited the CSIR, including 189 temporary employees. Of the total exits, 271 (87%) were black South Africans and 154 (49%) were female South Africans. Additionally, 219 (70%) of the exits were from SET roles, while 94 (30%) were from support positions.

Table 5: Total staff exits

Staff category	AM	AF	CM	CF	IM	IF	WM	WF	Total (SA)	FM	FF	Total (foreign)	Grand total
Total permanent	**46**	**24**	**4**	**4**	**8**	**6**	**15**	**14**	**121**	**3**	**0**	**3**	**124**
Fixed-term contracts*	15	12	3	0	1	2	1	4	**38**	4	0	**4**	**42**
Pipeline	56	86	1	0	1	2	0	0	**146**	1	0	**1**	**147**
Total temporary	**71**	**98**	**4**	**0**	**2**	**4**	**1**	**4**	**184**	**5**	**0**	**5**	**189**
Grand total	**117**	**122**	**8**	**4**	**10**	**10**	**16**	**18**	**305**	**8**	**0**	**8**	**313**

** Staff contracts less than 12 months*

A total of 124 permanent staff exited the CSIR from the beginning of the FY to the end of March 2025. Of these, 92 (74%) were black South Africans and 48 (39%) were female South Africans. Among the exits, 95 (77%) were from SET roles, while 29 (23%) were from support roles. The annualised turnover rate as of the end of March 2025 was 6.4% for all permanent staff and 6.8% for permanent staff in SET.

Table 6: Permanent staff exits by occupational category

Occupational level	AM	AF	CM	CF	IM	IF	WM	WF	Total (SA)	FM	FF	Total (foreign)	Grand total
Top management	1	0	0	0	0	0	0	0	**1**	0	0	**0**	**1**
Senior management	0	1	0	0	0	0	1	0	**2**	0	0	**0**	**2**
Middle management	20	8	1	3	6	3	13	8	**62**	2	0	**2**	**64**
Skilled	18	10	2	1	2	3	1	6	**43**	1	0	**1**	**44**
Semi-skilled	7	5	1	0	0	0	0	0	**13**	0	0	**0**	**13**
Unskilled	0	0	0	0	0	0	0	0	**0**	0	0	**0**	**0**
Grand total	**46**	**24**	**4**	**4**	**8**	**6**	**15**	**14**	**121**	**3**	**0**	**3**	**124**

Table 7: Permanent staff exits by category

Permanent staff exits	AM	AF	CM	CF	IM	IF	WM	WF	Total (SA)	FM	FF	Total (foreign)	Grand total
Deceased	1	1	0	0	0	0	1	1	**4**	0	0	**0**	**4**
Dismissal	1	1	1	0	1	0	0	0	**4**	0	0	**0**	**4**
End of contract	0	0	0	0	0	0	0	0	**0**	0	0	**0**	**0**
No-fault dismissal: incapacity	2	1	1	0	0	0	0	1	**5**	0	0	**0**	**5**
No-fault dismissal: retrenchment	0	0	0	0	0	0	0	0	**0**	0	0	**0**	**0**
Resignation	40	20	1	4	6	6	10	7	**94**	3	0	**3**	**97**
Retirement	2	1	1	0	1	0	4	5	**14**	0	0	**0**	**14**
Grand TOTAL	**46**	**24**	**4**	**4**	**8**	**6**	**15**	**14**	**121**	**3**	**0**	**3**	**124**

Table 8: Staff on fixed-term contracts exits

Staff on fixed-term contracts exits*	AM	AF	CM	CF	IM	IF	WM	WF	Total (SA)	FM	FF	Total (foreign)	Grand total
End of contract	71	98	4	0	2	4	1	4	**184**	5	0	**5**	**189**
Deceased	0	0	0	0	0	0	0	0	**0**	0	0	**0**	**0**
Grand total	**71**	**98**	**4**	**0**	**2**	**4**	**1**	**4**	**184**	**5**	**0**	**5**	**189**

**Staff contracts less than 12 months*

HC DEVELOPMENT

STUDENT PIPELINE DEVELOPMENT

The number of students in the student pipeline programmes as of 31 March 2025 is presented in the table below, along with their demographic breakdown.

Table 9: Student pipeline programmes

Programme	AM	AF	CM	CF	IM	IF	WM	WF	Total SA	FM	FF	Total (foreign)	Grand total
CSIR Bursary programme	35	35	1	1	1	1	4	1	**79**	1	0	**1**	**80**
IBS Bursary programme	66	121	2	12	1	7	7	14	**230**	5	3	**8**	**238**
merSETA bursaries	2	3	0	0	0	0	0	1	**6**	0	0	**0**	**6**
Studentships	13	10	0	0	0	0	2	0	**25**	1	1	**2**	**27**
GIT	4	8	0	0	0	0	1	1	**14**	0	0	**0**	**14**
Total	**120**	**177**	**3**	**13**	**2**	**8**	**14**	**17**	**354**	**7**	**4**	**11**	**365**
Percentage	**33%**	**48%**	**1%**	**4%**	**0%**	**2%**	**4%**	**5%**	**97%**	**2%**	**1%**	**3%**	**100%**

CSIR Bursary programme

In 2025, the CSIR Bursary Programme awarded bursaries to 29 students, bringing the total number of currently funded bursary students to 80.

Inter-Bursary Support programme

The Department of Science, Technology and Innovation (DSTI) allocated over R40 million for the 2024/25 FY to support the 238 currently funded students.

merSETA Bursary programme

Currently, six students are funded under this programme: three undergraduates, one Master's student and two Doctoral candidates.

Studentships

In the 2024/25 FY, a total of 27 studentships were awarded. Six of the candidates have been absorbed into various clusters.

GIT programme

In the 2024/25 FY, the GIT programme supported 14 beneficiaries. Since its inception in 2019/20, a total of 111 graduates have benefited from the programme. To date, 9 GITs have been absorbed into permanent positions, bringing the total number of graduates permanently appointed in various clusters to 66.

UNEMPLOYED YOUTH DEVELOPMENT PROGRAMMES

Table 10: Unemployed youth development programmes

Programme	AM	AF	CM	CF	IM	IF	WM	WF	Total SA	FM	FF	Total foreign	Grand total
YES	17	36	5	7	0	0	0	0	**65**	0	0	**0**	**65**
Internship	41	78	0	1	0	2	0	0	**122**	0	0	**0**	**122**
WIL	6	2	0	0	0	0	0	0	**8**	0	0	**0**	**8**
Total	**64**	**116**	**5**	**8**	**0**	**2**	**0**	**0**	195	**0**	**0**	0	195
Percentage	**33%**	**59%**	**3%**	**4%**	**0%**	**1%**	**0%**	**0%**	100%	**0%**	**0%**	0%	100%

YES programme

The YES programme continues to support the state's efforts to reduce youth unemployment. In the 2024/25 FY, a new cohort of 65 YES participants was appointed, comprising 66% women and 66% individuals with disabilities.

WIL

Currently, eight students are funded under the Manufacturing Engineering and Related Services Sector Education Training Authority (merSETA) Bursary programme. Since 2019, the programme has supported 50 students through their training, all of whom have successfully graduated.

Internship programme

During the 2024/25 FY, the organisation offered internship opportunities to 122 unemployed youth. The interns are placed across various clusters and portfolios, with 66% appointed as SET interns and 34% in support roles.

Absorption of unemployed youth

The primary objective of the organisation's pipeline programme is to facilitate the transition from internships to permanent employment within the organisation and the broader industry, particularly in sectors aligned with the National System of Innovation. In the current FY, 60 interns were permanently appointed, resulting in an absorption rate of 31% - a significant improvement compared to previous years.

CSIR STAFF TRAINING

TECHNICAL TRAINING

During the 2024/2025 FY, the CSIR invested a total of R11 090 934 in staff training, with 1 707 employees enrolled for training. Fourteen of these training activities were specifically designed for employees living with disabilities.

The figure and tables below illustrate classroom-based training at the CSIR for the 2024/25 FY:

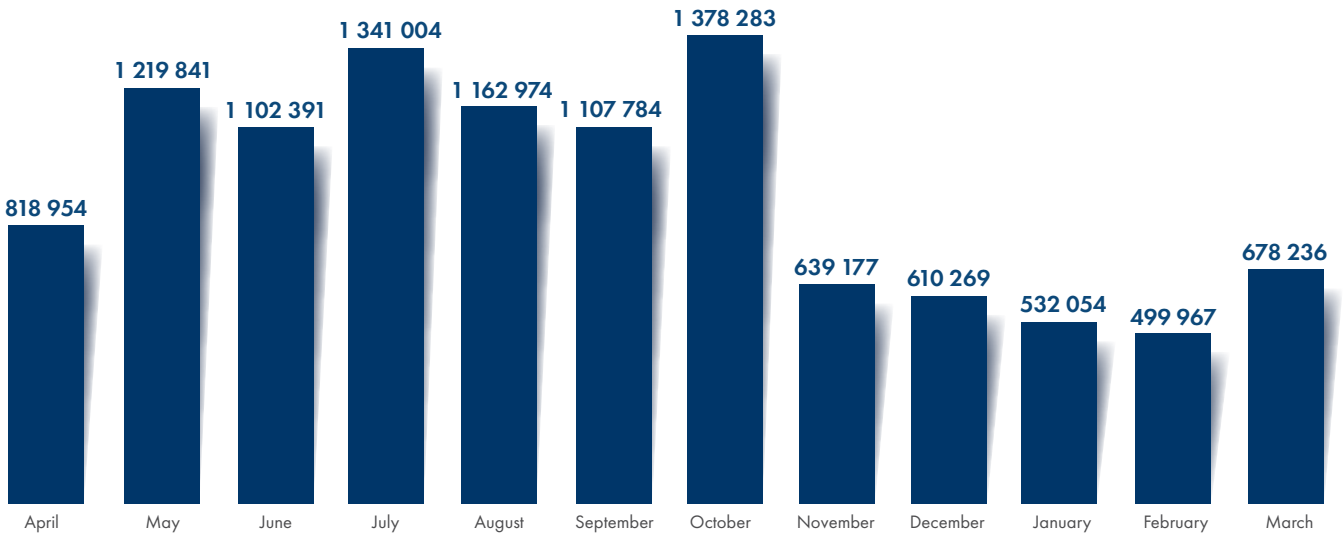


Figure 3: Summary of training costs by month

Table 11: Training costs by occupational category

Occupational level	Number of staff	Amount (Rand)	% of total training cost
Top management	42	334 225	3.01%
Senior management	91	872 685	7.87%
Middle management	677	5 247 901	47.32%
Skilled	728	4 124 095	37.18%
Semi-skilled	146	457 844	4.13%
Unskilled	23	54 184	0.49%
Grand total	**1 707**	**11 090 934**	**100%**

Table 12: Training costs by event type

Training event	Number of staff	Amount (Rand)
Computer-based training	296	2 529 929
Conferences	541	4 341 815
Seminars	870	4 219 190
Total	**1 707**	**11 090 934**

Table 13: Training provided by occupational categories, race and gender

Occupational level	AM	AF	CM	CF	IM	IF	WM	WF	Total (SA)	FM	FF	Total (foreign)	Grand total
Top management	18	12	0	0	2	0	2	8	**42**	0	0	**0**	**42**
Senior management	27	22	7	0	6	0	16	13	**91**	0	0	**0**	**91**
Middle management	210	216	18	9	35	27	80	80	**675**	2	0	**2**	**677**

Occupational level	AM	AF	CM	CF	IM	IF	WM	WF	Total (SA)	FM	FF	Total (foreign)	Grand total
Skilled	300	302	25	6	17	24	30	24	**728**	0	0	**0**	**728**
Semi-skilled	87	35	16	3	1	1	2	1	**146**	0	0	**0**	**146**
Unskilled	19	4	0	0	0	0	0	0	**23**	0	0	**0**	**23**
Grand total	**661**	**591**	**66**	**18**	**61**	**52**	**130**	**126**	**1 705**	**2**	**0**	**2**	**1 707**

e-Learning

The continuation of the e-Learning platform in the 2024/25 FY enabled the organisation to complement traditional classroom-based training methods. Through this platform, CSIR employees were able to develop their capabilities by accessing behavioural, business, technical and leadership online short courses, all aimed at supporting organisational performance. As of 31 March 2025, a total of 2 638 courses and 63 926 videos had been completed online.

Leadership and management development training programmes

Graduation ceremonies for the various programmes under the Leadership and Management Development Programme were held in the first quarter of the 2024/25 FY.

A graduation ceremony was held on 17 April 2024 for 11 graduates of the Executive Development Programme, delivered by UCT Graduate School of Business. A certification ceremony for In-role Programmes with Maccauvlei took place on 13 May 2024 for 78 employee graduates. The Transitional Programme, delivered by Wits Business School, saw the graduation of 66 employees on 14 and 15 May 2024. The total of 155 graduates consisted of 90% black employees, with 42% being female. Contracting for the next cohort has been finalised and the programmes will begin with block sessions in the first quarter of the next FY.

The Mentorship Train-the-Trainer initiative was successfully implemented during the FY. This included the completion of mentorship training materials and process flows, the development of a mentor and mentee database, as well as the training of over 130 internal staff members.

CSIR Staff Bursaries

The CSIR continues to invest in its employees by offering staff bursaries. In the 2024/25 FY, a call was issued to employees, resulting in 93 continuation applications and 152 new applications that met the requirements – bringing the total to 245. Of the new applications, 59% were in SET fields and 41% were in non-SET fields.

External stakeholder engagements on skills development

Strategic partnerships continued during this FY, securing over R58 million in funding from entities including the DSTI, Sector Education and Training Authorities (SETAs) and Technical and Vocational Education and Training colleges.

A new partnership was established with the Sasol Foundation to support undergraduate students in fields aligned with the CSIR's mandate. Ten students are currently partially funded through this initiative, with an MoU signed for a three-year period.

In addition, strong engagement has been achieved with key stakeholders—such as the National Skills Authority, National Skills Fund and the Quality Council for Trades and Occupations to support the co-development and implementation of the CSIR Skills Strategy.

CORPORATE SOCIAL INVESTMENT

The CSIR participated in International Nelson Mandela Day 2024 in Gauteng, KwaZulu-Natal and the Western Cape as follows:

- Gauteng (Sikhululekile Maths, Science and ICT School of Specialisation) - 19 July 2024
- KwaZulu-Natal (Chesterville Secondary School) - 18 July 2024
- Western Cape (Kayamandi Secondary School) - 25 July 2024

Activities at each school included the donation of various furniture items such as chairs, tables, cabinets and notice boards. In addition, exhibitions and classroom talks were conducted at Sikhululekile Maths, Science and ICT School of Specialisation and Kayamandi Secondary School. Kayamandi Secondary School also received used laptops in addition to the furniture donations.

Through its CSI programme, the CSIR has significantly contributed to improving matriculation outcomes at the schools it supports, which collectively achieved an impressive average pass rate of 90.5% across seven schools. The results are as follows:

Table 14: Matric results of schools supported by the CSIR

School name	Pass rate	Number of distinctions
Ukuphumula Secondary School	100%	90
Chesterville Secondary School	100%	54
Phumanyova High School	99.6%	263
Mapenane School of Specialisation	90.4%	34
Kayamandi Secondary School	85.8%	77
Sikhululekile School of Specialisation	83.6%	51
Fundukhaliphe High School	74.1%	21

The CSIR has also positively impacted rural education by awarding 24 bursaries since 2021 to learners from CSI beneficiary schools. These bursaries support tertiary studies at public universities in South Africa in disciplines aligned with the CSIR's strategic focus areas. This investment is beginning to bear fruit, with three students having completed their SET degrees in 2024. Two of these graduates have been absorbed into the organisation, while one is pursuing an honours degree.

Another milestone was the launch of the CSI Entrepreneurship Development Programme, through which 20 aspiring entrepreneurs successfully completed the inaugural programme. The second cycle commenced with a rigorous screening process of 1 200 applications, which was narrowed down to approximately 130 candidates. This cycle targets 25 entrepreneurs – five more than the previous cohort – who will receive eight months of mentorship and 12 months of entrepreneurship development, including support in developing fundable and bankable business plans. The programme continues to receive strong support from key partners, namely the National Mentorship Programme, the Industrial Development Corporation and the Small Business Enterprise Development Agency. The CSIR and its partners continue to explore external funding opportunities, particularly for providing technical support to entrepreneurs.

TALENT MANAGEMENT

TALENT REVIEW

The CSIR continued to implement its succession plan through rigorous talent reviews, at Executive level down to senior management level, as well as for scarce and critical roles in FY 2024/25. Succession plans for the CEO and Group Executives' direct reports were finalised, approved and presented to the Board for noting.

CAREER PATHING

The CSIR continued promoting the Experience Navigator Tool, which helps employees identify gaps between their current profile and desired future roles, allowing them to take proactive steps to address these gaps and prepare for future career opportunities. The Performance Management System has been updated to include the rationale for the Experience Navigator Tool, supporting structured career aspiration discussions and the tracking of Individual Development Plans. To date, 21 sessions have been conducted for employees and line managers; email communications have been sent to all CSIR employees and one CSIR Connect video has been released.

CAREER LADDERS

The organisation conducted two cycles of the career ladder assessment process, providing SET employees with opportunities for promotions. During the 2024/25 FY, targeted roadshows were held to educate SET staff on the process and required administration, helping them improve their chances of promotion. Consequently, three employees were promoted to chief researcher level, including one from the Accelerated Researcher Development Programme. Additionally, 27 employees were promoted to principal researcher level, 55 to senior researcher level and 57 to candidate researcher and researcher levels, totalling 142 promotions for the FY.

Attraction and retention initiatives

The implementation of approved frameworks continued in the 2024/25 FY as part of efforts to attract and retain SET staff at identified levels. These initiatives include:

- Attraction and retention of chief and principal researchers;
- Attraction and retention of SET females;
- The Accelerated Principal Researcher Programme; and
- The Capability Development Investment Programme aimed at attracting chief researchers from the external market.

Staff dependents' bursaries

In line with the CSIR's commitment to transforming human capital and enhancing the employee value proposition for attraction and retention, bursaries continued to be offered for staff dependents in FY 2024/25. This opportunity is available to all dependents of employees who are currently pursuing or planning to pursue tertiary education in the 2025 academic year.

The organisation received 74 continuation applications from staff dependents for the 2024 academic year and 78 new applications for the 2025 academic year, resulting in a total of 152 funded staff dependents.

Performance management

The CSIR remained committed to its performance management processes during the 2024/25 FY, ensuring that employees were equipped with the necessary tools and resources to excel in their roles. The performance process aimed to align individual performance with the overarching objectives of the organisation, reinforce the CSIR's strategic goals and foster a culture of continuous improvement and excellence. By providing tailored support and training to employees, the performance management cycle achieved a 100% performance contracting and 98% completion of performance reviews for FY 2024/25. The 360° feedback process was rolled out once again with enhanced features and a revised questionnaire aligned with the organisation's values of excellence, people-centred, integrity and collaboration.

REWARDS AND RECOGNITION

Excellence Awards

In line with the CSIR's commitment to recognising its employees, the CSIR Excellence Awards were held on 22 November 2024 at the CSIR International Convention Centre. This prestigious event celebrated the outstanding achievements and contributions of staff members. With over 400 nominations received, 80 employees were honoured with awards from the 183 shortlisted candidates, highlighting the exceptional talent and dedication within the organisation.

Pension Fund

The CSIR pension fund hosted a webinar in July 2024 to educate members on the new two-pot system, which came into effect 1 September 2024. This system provides flexibility and financial security by allowing employees to allocate their pension contributions into two pots. The first pot is for savings that can be accessed during employment for specific conditions like emergencies or significant life events. The second pot is for long-term retirement savings, ensuring employees are financially prepared for retirement. The webinar was well attended, and the recording was made available for those who missed it and for future training purposes.

To further support the pension fund members in achieving a comfortable retirement, another webinar was hosted to educate and encourage members to increase their contribution rates. Effective 1 April 2025, the default contribution rate for new employees will be raised from 15% to 17% by the CSIR.

Alumni Programme

Following the launch of the CSIR Alumni and Emeritus Programme in FY 2023/24, there has been a significant increase in former employees joining the programme during the 2024/25 FY. The programme currently has 1 361 members, reflecting an increase of 276 from the previous FY. Some alumni continue to volunteer by mentoring aspiring entrepreneurs through the CSIR Entrepreneurship Development Programme.

CSIR staff bank preferential rates

As part of enhancing the staff benefits, the CSIR continued its project to support the financial well-being of employees by collaborating with three major banks – First National Bank, Absa and Standard Bank – to offer exclusive preferential rates to CSIR staff. Additionally, the banks conducted a series of webinars on financial education to further support employee financial well-being.

EMPLOYEE RELATIONS AND TRANSFORMATION

The CSIR continued to host workshops on various employee relations topics as part of its Capability and Capacity Building Initiative. These workshops aimed to inform and empower managers and employees about relevant legislation, policies, procedures, guidelines, and processes pertaining to employee relations. Attendance has been satisfactory, with an increase from 867 in the previous FY to 1 777 participants in the 2024/25 FY.

Internal and external employee relations matters

Table 15: Summary of internal and external employee relations matters

Matters	Investigations	Disciplinary	Grievances	Incapacity	CCMA	Labour court	Total
Active	4	3	3	8*	4	0	22
Closed	18	16	8	11	7	0	60

* All eight active incapacity cases are incapacity due to ill health or injury

Employment Equity Report

The EEA2 and EEA4 forms (employment equity reports) for 2024 were submitted to the Department of Employment and Labour on 19 December 2024. The submission deadline was 15 January 2025.

EMPLOYEE WELLNESS

Psychosocial intervention

The CSIR hosted successful wellness days across all regions of the organisation, including the head office, during September and October 2024. The "Disconnect to Recharge and Reconnect" campaign provided employees with a safe platform to reflect on personal experiences and re-engage with colleagues, reinforcing workplace cohesion and emotional wellness. Wellness Day activities included health risk assessments, debriefing sessions facilitated by clinical psychologists and physical exercises conducted by our fitness partner, Virgin Active. These events were complemented by mental health webinars focused on resilience and psychological safety.

The psychosocial webinar series for the FY concluded with three sessions on atomic habits to help employees achieve their goals. This followed by a webinar on work-life balance and another on personal agility as a key enabler for navigating change successfully.

Climate Survey

Culture initiatives continued, guided by the outcomes of the 2021 Climate Survey, the 2023 Pulse Survey and the response plans developed in line with staff feedback. In FY 2024/25, a Climate Survey Communication Plan was developed in collaboration with internal communication. The purpose of this plan was to gather feedback from staff and management across the organisation and communicate this feedback to demonstrate the impact of the CSIR People Strategy initiatives and to amplify leadership climate survey response actions.

The second phase of the Values-Based Leadership Programme for the Executive Committee (Exco) members was rolled out in the last quarter of the FY. A 360° Feedback Survey was conducted for all Exco members to facilitate self-reflection and awareness, based on input received from survey respondents.

Sports and recreation

The Comrades Marathon took place on 9 June 2024, with 29 participants comprising CSIR Running Club members and CSIR employees taking part in the ultimate human race. Twenty-six runners reached the finish line, resulting in a 90% completion rate.

The 31st CSIR Road Race, in collaboration with BestMed, was successfully held in October 2024. Over 2 800 entries were received, with a total of 2 677 participants crossing the finish line. Among them, 1 089 completed the 10 km race and 792 completed the 21 km race. Notably, race participation increased by 15.7% in 2024 compared to 2023, reflecting growing employee interest in an active lifestyle and wellness programmes.

HC SYSTEM IMPROVEMENTS

360° Performance Assessment tool

System enhancements for the 360° Feedback Survey were completed, with full implementation and communication planned for the new FY. Notable improvements include the integration of external customer feedback, enhanced graphical reporting, the addition of an auto-save functionality, and the inclusion of employee self-evaluations. The questionnaire for this assessment tool is aligned with CSIR values, reflecting the organisation's commitment to creating a values-based culture.

Excellence awards adjudication application

In collaboration with the ICT portfolio, a dedicated adjudication application for the Excellence Awards was developed, tested and implemented - significantly streamlining the evaluation and scoring process for the adjudication committee.

BIS System

The business information system (BIS) was leveraged to execute calculations related to the short-term incentive scheme, cost-of-living salary adjustments, and career ladder processes, ensuring consistency and accuracy.

The BIS key performance indicator reporting functionality was expanded to include a new reporting layer at the divisional and portfolio levels, further enhancing the granularity and utility of organisational performance reporting.

HUMAN RESOURCE OVERSIGHT STATISTICS

PERSONNEL RELATED EXPENDITURE

Table 16: Personnel cost by division/portfolio

Division/portfolio	Total expenditure for the entity (R'000)	Personnel expenditure (R'000)	Personnel expenditure as a % of total expenditure	No. of employees	Average personnel cost per employee (R'000)
CSIR Advanced Chemistry and Life Sciences	312 818	175 886	56%	224	785
CSIR Advanced Production and Security	928 264	577 845	62%	620	932
CSIR Smart Society	1 321 686	635 869	48%	756	841
Business Excellence and Integration	165 058	69 439	42%	80	868
Chief Financial Officer	228 606	142 449	62%	206	692
Human Capital and Communication	142 728	81 149	57%	133	610
Legal Compliance and Business Enablement	331 376	138 647	42%	250	555
CSIR Leadership and Governance	59 488	51 380	86%	29	1 772
Total	**3 490 024**	**1 872 664**	**54%**	**2 298**	**815**
Provision for STI 2024/25	114 003	114 003			
Post-retirement medical benefit	1 131	1 131			
Total costs	**3 605 158**	**1 987 798**			

Table 17: Personnel cost by occupational level

Occupational level	Personnel expenditure (R'000)	% of personnel expenditure to total personnel cost	No. of employees	Average personnel cost per employee (R'000)
Top Management	25 252	1%	19	1 329
Senior Management	113 151	6%	106	1 067
Professional qualified	858 007	46%	870	986
Skilled	689 243	37%	989	697
Semi-skilled	165 457	9%	214	773
Unskilled	21 554	1%	100	216
TOTAL	**1 872 664**	**100%**	**2 298**	**815**
Provision for STI 2024/25	114 003			
Post-retirement medical benefit 2024/25	1 131			
Total employees' remuneration	**1 987 798**			

Table 18: Performance rewards

Occupational level	Performance rewards	Personnel expenditure (R'000)	% of performance rewards to total personnel cost
Top Management	1 160	25 252	5%
Senior Management	6 374	113 151	6%
Professional qualified	36 450	858 007	4%
Skilled	24 839	689 243	4%
Semi-skilled	7 015	165 457	4%
Unskilled	773	21 554	4%
TOTAL	**76 611**	**1 872 664**	**4%**
Provision for STI 2024/25		114 003	
Post-retirement medical benefit		1 131	
Total employees' remuneration		**1 987 798**	

Table 19: Employment and vacancies per division/portfolio

Division/portfolio	2023/2024 No. of employees	2024/2025 Approved posts	2024/2025 No. of employees	2024/2025 Vacancies	% of vacancies
CSIR Advanced Chemistry and Life Sciences	232	232	224	8	3.57%
CSIR Advanced Production and Security	636	638	620	18	2.90%
CSIR Smart Society Division	736	796	756	40	5.29%
Business Excellence and Integration	81	85	80	5	6.25%
Chief Financial Officer	187	207	206	1	0.49%
Human Capital and Communication	128	138	133	5	3.76%
Legal Compliance and Business Enablement	242	254	250	4	1.60%
CSIR Leadership and Governance	29	30	29	1	3.45%
Total	**2 271**	**2 380**	**2 298**	**82**	**3.57%**

Table 20: Employment and vacancies by occupational level

Occupational level	2023/2024 No. of employees	2024/2025 Approved posts	2024/2025 No. of employees	2024/2025 Vacancies	% of vacancies
Top Management	21	20	19	1	5.26%
Senior Management	95	108	106	2	1.89%
Professional qualified	859	901	870	31	3.56%
Skilled	970	1 016	989	27	2.73%
Semi-skilled	213	220	214	6	2.80%
Unskilled	113	115	100	15	15.00%
Total	**2 271**	**2 380**	**2 298**	**82**	**3.57%**

Several efforts were made to fill critical vacancies, particularly at senior management level and other hard-to-fill, highly skilled positions. To support these efforts, the CSIR engaged recruitment agencies, conducted targeted LinkedIn searches and leveraged employee referrals. These strategies helped improve turnaround times and resulted in all executive-level vacancies being successfully filled. The CSIR has continued to implement a succession planning process, which has led to the creation of succession pools with focused development plans. As a result, some candidates from these pools have since been appointed to executive positions.

To enhance the organisation's attractiveness to top talent, a multi-pronged approach was adopted. This included the use of LinkedIn, employee referrals and active engagements and planning with hiring managers, as well as partnerships with professional bodies, universities and placement organisations such as recruitment agencies and bootcamp organisations. In addition, formal organisational review platforms were established and data from survey outcomes was analysed to inform retention strategies and improve the overall appeal of the organisation.

Table 21: Employment changes by occupational level

Occupational Level	Employment at beginning of period	Appointments	Terminations	Internal movements (promotions, type changes, renewal of contracts)	Employment at end of the period
Top Management	21	1	2	-1	19
Senior Management	95	8	4	7	106
Professional qualified	859	44	75	42	870
Skilled	970	166	134	-13	989
Semi-skilled	213	17	29	13	214
Unskilled	113	79	69	-23	100
Total	**2271**	**315**	**313**	**25**	**2 298**

Turnover Rate for Permanent employees = 6.4% and for Permanent SET employees = 6.8%

Table 22: Reasons for staff leaving

Reason	Number	% of total no. of staff leaving
Death	4	1.28%
Resignation	97	30.99%
Dismissal	4	1.28%
Retirement	14	4.47%
Ill health	5	1.60%
Expiry of contract	189	60.38%
Other	0	0.00%
Total	**313**	**100%**

The primary reasons for employees leaving, aside from contract expiration, was improved career development opportunities elsewhere (37%) and seeking higher salary and benefits (9%). To address these departures, the organisation continues to implement interventions such as external recruitment and the absorption of candidates from its internal talent pipeline.

Table 23: Labour relations - Misconduct and disciplinary action

Nature of disciplinary Action	Number
Verbal warning	3
Written warning	31
Final written warning	11
Dismissal	8

Table 24: Equity target and employment equity status - Male

Occupational level	Male							
	African		Coloured		Indian		White	
	Current	Target	Current	Target	Current	Target	Current	Target
Top management	10	11	0	0	1	1	2	2
Senior management	35	30	5	5	8	8	23	21
Professional qualified	224	222	21	25	54	56	169	167
Skilled	360	367	24	27	23	28	44	42
Semi-skilled	93	80	13	14	1	1	0	0
Unskilled	37	43	5	1	0	0	0	0
TOTAL	**759**	**753**	**68**	**72**	**87**	**94**	**238**	**232**

Table 25: Equity target and employment equity status - Female

Occupational level	Female							
	African		Coloured		Indian		White	
	Current	Target	Current	Target	Current	Target	Current	Target
Top management	3	3	0	0	0	0	2	2
Senior management	8	10	1	1	0	0	12	10
Professional qualified	199	186	9	11	28	31	107	106
Skilled	435	407	21	23	27	26	43	49
Semi-skilled	91	94	11	11	1	2	4	4
Unskilled	51	56	7	2	0	1	0	0
Total	**787**	**756**	**49**	**48**	**56**	**60**	**168**	**171**

Table 26: Equity target and employment equity status - People with disabilities

Occupational level	Disabled staff			
	Male		Female	
	Current	Target	Current	Target
Top management	0	0	0	0
Senior management	1	1	1	1
Professional qualified	6	8	2	3
Skilled	6	6	3	2
Semi-skilled	0	0	0	0
Unskilled	14	10	29	20
Total	**27**	**25**	**35**	**26**

PART F
PFMA COMPLIANCE REPORT

IRREGULAR, FRUITLESS AND WASTEFUL EXPENDITURE AND MATERIAL LOSSES

Irregular expenditure

a) Reconciliation of irregular expenditure

Description	2024/2025	2023/2024
	R'000	R'000
Opening balance	5 328	12 530
Adjustment to opening balance	-	(9 073)
Opening balance as restated	5 328	3 457
Add: Irregular expenditure confirmed	5 661	1 798
Less: Irregular expenditure condoned	-	-
Less: Irregular expenditure not condoned and removed	-	-
Less: Irregular expenditure recoverable	-	-
Less: Irregular expenditure not recoverable and written off	-	-
Add: Adjustment	-	73
Closing balance	**10 989**	**5 328**

The adjustment to the 2023/2024 opening balance includes casting errors identified in the previous financial year (R110 000), irregular expenditure incurred in 2022/2023 and confirmed in the current financial year (R1.582 million), less amounts not condoned and removed that were approved in 2023/2024 (R10.603 million) and less amounts condoned (R162 000).

In an effort to maintain compliance with relevant legislation, an extensive investigation into all irregular expenditure under assessment was conducted during the 2024/2025 financial year, resulting in confirmed irregular expenditure of R1.798 million for 2023/2024 and R5.661 million for 2024/2025.

Reconciling notes to the annual financial statement disclosure

Description	2024/2025	2023/2024
	R'000	R'000
Irregular expenditure that was under assessment	-	1 798
Irregular expenditure that relates to the prior year and identified in the current year	-	-
Irregular expenditure for the current year	5 661	-
Total	**5 661**	**1 798**

b) Details of irregular expenditure (under assessment, determination and investigation)

Description	2024/2025	2023/2024
	R'000	R'000
Irregular expenditure under assessment	325	1 798
Irregular expenditure under determination	-	-
Irregular expenditure under investigation	-	-
Total	**325**	**1 798**

During the 2023/2024 financial year, there was irregular expenditure of R3.715 million under assessment. R1.798 million relating to the 2023/2024 financial year and R1.517 million relating to the 2022/2023 financial year was subsequently confirmed as irregular expenditure. It was concluded that the remaining balance did not constitute irregular expenditure.

c) Details of irregular expenditure condoned

Description	2024/2025	2023/2024
	R'000	R'000
Irregular expenditure condoned	-	-
Total	**-**	**-**

d) Details of irregular expenditure removed (not condoned)

Description	2024/2025	2023/2024
	R'000	R'000
Irregular expenditure NOT condoned and removed	-	-
Total	**-**	**-**

In 2023/2024, irregular expenditure of R10.603 million, relating to prior years, was considered and approved by the CSIR Board for removal in line with the relevant National Treasury Instruction Notes. The 2023/2024 opening balance (Table a) above) has been adjusted for this removal.

e) Details of irregular expenditure recoverable

Description	2024/2025	2023/2024
	R'000	R'000
Irregular expenditure recoverable	-	-
Total	**-**	**-**

f) Details of current and previous year irregular expenditure written off (irrecoverable)

Description	2024/2025	2023/2024
	R'000	R'000
Irregular expenditure written off	-	-
Total	**-**	**-**

Additional disclosure relating to Inter-Institutional Arrangements

g) Details of non-compliance cases where an institution is involved in an inter-institutional arrangement (where such institution is not responsible for the non-compliance)

Description
None
Total

h) Details of irregular expenditure where an institution is involved in an inter-institutional arrangement (where such institution is responsible for the non-compliance)

Description	2024/2025	2023/2024
	R'000	R'000
None	-	-
Total	**-**	**-**

i) Details of disciplinary or criminal steps taken as a result of irregular expenditure

Disciplinary steps taken
During the reporting period, instances of irregular expenditure were identified through reviews. Each case was thoroughly investigated to determine the root cause, identify responsible parties and implement appropriate remedial actions. Targeted training sessions were conducted for staff involved in procurement and expenditure management transgressions, to reinforce compliance with applicable legislation and internal policies. Disciplinary processes were initiated in cases where staff were found to have acted negligently or in breach of policy. Sanctions imposed included written warnings, final warnings, and, in serious cases, termination of employment. All outcomes were in line with the organisation's disciplinary code and relevant labour regulations.

Fruitless and wasteful expenditure

a) Reconciliation of fruitless and wasteful expenditure

Description	2024/2025	2023/2024
	R'000	R'000
Opening balance	141	191
Adjustment to opening balance	-	(73)
Opening balance as restated	141	118
Add: Fruitless and wasteful expenditure confirmed	-	43
Less: Fruitless and wasteful expenditure recoverable	-	(20)
Less: Fruitless and wasteful expenditure not recoverable and written off	-	-
Closing balance	**141**	**141**

The 2023/2024 opening balance was adjusted by R73 000 following the assessment and reclassification of the expenditure as irregular. R43 000 relating to 2023/2024 was confirmed in 2024/2025. An amount of R20 000 relating to 2023/2024 was recovered during the current financial year, with a further R23 000 expected to be recovered in the next financial year.

Reconciling notes to the annual financial statement disclosure

Description	2024/2025	2023/2024
	R'000	R'000
Fruitless and wasteful expenditure that was under assessment	-	43
Fruitless and wasteful expenditure that relates to the prior year and identified in the current year	-	-
Fruitless and wasteful expenditure for the current year	-	-
Total	**-**	**43**

b) Details of fruitless and wasteful expenditure (under assessment, determination and investigation)

Description	2024/2025	2023/2024
	R'000	R'000
Fruitless and wasteful expenditure under assessment	40	43
Fruitless and wasteful expenditure under determination	-	-
Fruitless and wasteful expenditure under investigation	-	-
Total	**40**	**43**

c) Details of fruitless and wasteful expenditure recoverable

Description	2024/2025	2023/2024
	R'000	R'000
Fruitless and wasteful expenditure recoverable	-	20
Total	**-**	**20**

An employee failed to submit an invoice for payment as requested, resulting in the accumulation of late payment and attorney fees, which were declared fruitless and wasteful expenditure. A written warning was issued, and the full amount has since been repaid to the CSIR.

d) Details of fruitless and wasteful expenditure not recoverable and written off

Description	2024/2025	2023/2024
	R'000	R'000
Fruitless and wasteful expenditure written off	-	-
Total	**-**	**-**

e) Details of disciplinary or criminal steps taken as a result of fruitless and wasteful expenditure

Disciplinary steps taken
Disciplinary processes were initiated in cases where staff were found to have acted negligently or breached policy. Sanctions imposed included written warnings, final warnings, and, in serious cases, termination of employment. All actions were taken in accordance with the organisation's disciplinary code and applicable labour regulations.

Additional disclosure relating to material losses in terms of PFMA Section 55(2)(b)(i) and (iii)

a) Details of material losses through criminal conduct

Material losses through criminal conduct	2024/2025	2023/2024
	R'000	R'000
Theft	-	-
Other material losses	-	-
Less: Recoverable	-	-
Less: Not recoverable and written off	-	-
Total	**-**	**-**

b) Details of other material losses

Nature of other material losses	2024/2025	2023/2024
	R'000	R'000
None	-	-
Total	**-**	**-**

c) Other material losses recoverable

Nature of losses	2024/2025	2023/2024
	R'000	R'000
None	-	-
Total	**-**	**-**

d) Other material losses not recoverable and written off

Nature of losses	2024/2025	2023/2024
	R'000	R'000
None	-	-
Total	**-**	**-**

LATE AND/OR NON-PAYMENT OF SUPPLIERS

Description	Number of invoices	Consolidated value
		R'000
Valid invoices received	50 502	1 657 844
Invoices paid **within** 30 days or agreed period	42 227	1 478 961
Invoices paid **after** 30 days or agreed period	7 825	165 557
Invoices older than 30 days or agreed period (***unpaid and without dispute***)	165	5 444
Invoices older than 30 days or agreed period (***unpaid and in dispute***)	285	7 882

The CSIR's standard contractually agreed payment terms are 45 days from the invoice date, unless otherwise explicitly stipulated. In most cases, delays in settling invoices within the agreed period are due to changes in the supplier's tax compliance status, which prevents the CSIR from processing the payment.

SUPPLY CHAIN MANAGEMENT

Procurement by other means

Project description	Name of supplier	Type of procurement by other means	Contract number	Value of contract R'000
Appointment of a service provider for the provision of seasonal casual workers at the CSIR International Convention Centre for a period of two years.	BetaGroup (Pty) Ltd	Single Source Procurement	SIN 241	R4 000
CSIR Hotel and Student Accommodation project.	Delta Built Environment Consultants (Pty) Ltd	Single Source Procurement	SIN 259	R3 275
Appointment of a service provider for a diverse 10 Gbps managed bandwidth link for the South African Large Telescope for a period of five years.	Liquid Telecommunications South Africa (Pty) Ltd	Single Source Procurement	SIN 263	R7 886
Stratafy Seeker: FY 2024/25 Technologies on the Face AOK24WP8.4.1 (Phase two).	Stratafy (Pty) Ltd	Single Source Procurement	SIN 363	R2 323
Bulk Argon tank changeover at CSIR Building 46 F Base Facility; equipment rental and liquid argon supply, equipment rental and liquid nitrogen supply in Building 19 B and equipment rental for Building 20.	Air Products South Africa (Pty) Ltd	Single Source Procurement	SIN 346	R4 171
Request for approval to renew the Packetfence license on an as-and-when required basis for a period of five years.	Akamai Technologies Canada Inc	Single Source Procurement	SIN 367	R1 920
Renewal of Autodesk Product Design and Manufacturing Collection (offline/floating) licenses on an as-and-when required basis for a maximum period of five years.	Modena Design Centres (Pty) Ltd	Single Source Procurement	SIN 368	R1 533
Manufacturing of the Traffic Stream Simulator prototype to support Accelerated Pavement Testing as part of a South African National Roads Agency project.	Hytec South Africa (RF) (Pty) Ltd	Single Source Procurement	SIN 369	R7 769

Project description	Name of supplier	Type of procurement by other means	Contract number	Value of contract R'000
Appointment of contractors for the refurbishment of the Future Pharma Facility, including the replacement of roof sheeting in Building 18.	Amakhaza Moia (Pty) Ltd	Single Source Procurement	SIN 373	R3 159
Preparation of annual financial statements and assistance with the annual audit process for the CSIR and its subsidiaries for a period of two years.	Kreston Pretoria	Single Source Procurement	SIN 377	R2 126
Replacement of the cluster computer room air conditioning unit.	Vertiv (South Africa) (Pty) Ltd	Single Source Procurement	SIN 389	R3 857
Procurement of single-use vessels and consumables specific to the Ambr 250 modular bioreactor system, used for cultivation processes for different microbial and mammalian cell cultures.	Sartorius South Africa (Pty) Ltd	Single Source Procurement	SIN 390	R2 500
Design, procurement, integration and commissioning of wind tunnel systems.	Technostar Engineering (Pty) Ltd	Single Source Procurement	SIN 396	R2 125
Procurement of the Figshare Data Repository Platform for a period of three years (2024-2027).	Tertiary Education and Research Network of South Africa	Single Source Procurement	SIN 410	R1 739
Access to CPUT ZA-Cube-2 Satellite bus architecture design and development expertise.	Cape Peninsula University of Technology	Single Source Procurement	SIN 418	R6 407
Renewal of Open Text Software Assurance and SUSE Products for twelve months to the CSIR.	Axiz (Pty) Ltd	Single Source Procurement	SIN 419	R3 863
Renewal of the Bentley AssetWise ALIM subscription on an as-and-when required basis for a period of three years.	Bentley systems International Ltd	Single Source Procurement	SIN 426	R5 530
Annual renewal of MATLAB software commercial license annually for a period of five years.	Opti-Num Solutions (Pty) Ltd	Single Source Procurement	SIN 427	R21 218
Request to run SuperPayroll and Payspace systems concurrently during the implementation phase of the selected payroll solution (Payspace), and to have access to SuperPayroll system data for the legislative required period of at least five years.	Pay Squad CC	Single Source Procurement	SIN 429	R2 086
Acquisition of the AS Helicopter UVH170H.	Dinkwanyana Aerospace (Pty) Ltd	Single Source Procurement	SIN 436	R10 000
Advanced smart tracking technologies.	Ekasilam Technologies (Pty) Ltd	Single Source Procurement	SIN 443	R1 643
Annual renewal of licenses for the PBSPro Scheduler for the Lengau HPC cluster.	Eclipse Holdings (Pty) Ltd	Single Source Procurement	SIN 445	R9 143
Snode Guardian tool for security network detection and response.	Snode Technologies (Pty) Ltd	Single Source Procurement	SIN 457	R2 072
Renewal of the ESRI cloud servers, hosting, licenses and software for a period of three years.	ESRI South Africa (Pty) Ltd	Single Source Procurement	SIN 474	R4 198
South African Weather Services site cut-in.	Dark Fibre Africa (Pty) Ltd	Sole Source Procurement	SSP 3975	R10 638
Waxy Enduro prototype combat boot.	Tarzan Shoes Investment (Pty) Ltd	Sole Source Procurement	SSP 3982	R4 822
Request for duct space, support and maintenance of the Vanderbijlpark metropolitan area network dark fibre links for a period of ten years.	Dark Fibre Africa (Pty) Ltd	Sole Source Procurement	SSP 4053	R3 626
Addition of the Teraco Brackenfell site to the existing Cape Town (CPT) fibre ring.	Dark Fibre Africa (Pty) Ltd	Sole Source Procurement	SSP 4073a	R8 644
Renewal of Taylor & Francis annual subscription for two years.	Taylor & Francis Group LLC	Sole Source Procurement	SSP 4075	R1 921

Project description	Name of supplier	Type of procurement by other means	Contract number	Value of contract R'000
Three-year renewal of the Schrödinger software at the Centre for High Performance Computing (CHPC) for the period 2024-2027.	Schrödinger LLC	Sole Source Procurement	SSP 4089	R3 228
Thales SAGA Flashlamp-Pumped Pulsed Nd: YAG Laser 1,6J. 532 nm, 10 Hz.	Thales LAS France SAS	Sole Source Procurement	SSP 4113	R3 211
Procurement of GZ534 (Men's Combat Boot) and GZ535 (Ladies Combat Boot).	Dick Whittington Shoes (Pty) Ltd	Sole Source Procurement	SSP 4114	R4 830
Renewal of the East London metropolitan area network links.	Dark Fibre Africa (Pty) Ltd	Sole Source Procurement	SSP 4116	R4 486
Addition of Teraco Rondebosch to the Southern Suburbs 1 (SS1) ring.	Dark Fibre Africa (Pty) Ltd	Sole Source Procurement	SSP 4158	R5 391
Corrective maintenance: Replacement of failed first-stage and second-stage air coolers for the Ingersoll Rand C1000 Centrifugal air compressor in the Medium Speed Wind Tunnel.	Ingersoll Rand Company South Africa (Pty) Ltd	Sole Source Procurement	SSP 4180	R4 630
Renewal of Quantec EasyData annual subscription for a period of three years: 1 September 2024 – 31 August 2027.	Quantec Enterprises (Pty) Ltd	Sole Source Procurement	SSP 4191	R1 564
Provision of maintenance services for the CSIR Medium Speed Wind Tunnel cooling towers.	TekTower (Pty) Ltd	Sole Source Procurement	SSP 4198	R1 645
Annual subscription fee for STAR-CCM+ Power Session Plus software license.	Aerotherm Computational Dynamics CC	Sole Source Procurement	SSP 4211	R1 780
Talent acquisition, talent insights, talent connections and engagements, CSIR communications, branding and marketing support.	Ayanda Mbanga Communications (Pty) Ltd	Sole Source Procurement	SSP 4256	R5 494
Subscription renewal for IEEE Electronic Library for a period of three years: 2024 – 2027.	EBSCO International Inc	Sole Source Procurement	SSP 4279	R6 464
Supply of a Slocum glider to the CSIR.	Teledyne Intruments Inc	Sole Source Procurement	SSP 4300	R8 522
Request for duct space and provisioning of support and maintenance for the Bloemfontein and Pietermaritzburg metropolitan area network dark fibre links for a period of ten years.	Dark Fibre Africa (Pty) Ltd	Sole Source Procurement	SSP 4301	R22 323
Supply of a new Liquid Robotics SV3 Wave Glider 2.	Liquid Robotics Inc	Sole Source Procurement	SSP 4305	R13 101
Microsoft Unified Support services.	Microsoft (SA) (Pty) Ltd	Sole Source Procurement	SSP 4313	R3 123
Subscription renewal for Orbit Intelligence for a period of two years: 2025 – 2027.	Questel-Orbit Inc	Sole Source Procurement	SSP 4340	R1 999
Procurement of One Simulation World elements for the Metaverse Joint Warfare Training Simulator development.	TMI consultancy (Pty) Ltd	Sole Source Procurement	SSP 4343	R2 132
Renewal of the BCC subscription for a period of three years: 2025 – 2028.	BCC Research LLC	Sole Source Procurement	SSP 4363	R2 353
Gartner license subscription for a period of two years: 2025 – 2027.	Gartner South Africa (Pty) Ltd	Sole Source Procurement	SSP 4379	R5 820
Subscription to Syspro Cloud ERP Software.	Syspro (Pty) Ltd	Sole Source Procurement	SSP 4393	R4 991
Supply of FLEXOPTIX programmable transceivers to the CSIR for the South African National Research Network.	Digital Community Architect (Pty) Ltd	Multi-Source Procurement	CSIR-MSP001	R3 482
Provision of a procurement risk and vetting solution to the CSIR for a period of two years.	ProbityX Consulting (Pty) Ltd	Multi-Source Procurement	CSIR-MSP002	R1 500

Project description	Name of supplier	Type of procurement by other means	Contract number	Value of contract R'000
Supply of Commvault license maintenance annual renewal to the CSIR.	Ekwantu Consulting (Pty) Ltd	Multi-Source Procurement	CSIR-MSP003	R3 276
Provision of maintenance, repairs and replacement of any plumbing installations and equipment, as-and-when required, at all CSIR Gauteng sites for a period of five years.	1. Maanda- Fadho construction and projects (Pty) Ltd 2. Leano Construction Solutions (Pty) Ltd 3. Bongumcebo Civils and Project Managers (Pty) Ltd	Multi-Source Procurement	CSIR-MSP004	R10 000
Provision of travel management services for a period of two years.	Carlson Wagonlit Travel (Pty) Ltd	Urgent Source Procurement	URG002	R8 267
Total				**R277 806**

Contract variations and expansions

Project description	Name of supplier	Contract modification type (Expansion or Variation)	Contract number	Original contract value	Value of previous contract expansion/s or variation/s (if applicable)	Value of current contract expansion or variation
				R'000	R'000	R'000
Provision of fleet management services to the CSIR on an as-and-when-required basis for a period of five years.	Bidvest Bank Ltd	Variation	3454/28-05-2021	R10 000	N/A	R5 000
Provision of managed bandwidth connectivity for the South African Environmental Observation Network Pietermaritzburg site.	FibreCo Communications (Pty) Ltd	Expansion	2722/31-03-2023	R1 839	N/A	R368
Supply and installation of TRANE air-cooled screw chillers with variable volume index screw chiller technology for the CSIR.	SFI Group (Pty) Ltd	Variation	PO1000767803	R10 131	N/A	R5 648
Extension of the provision of professional services for the Import/Export department at the CSIR.	Sardonyx Investment (Pty) Ltd	Expansion	3434.1/03-09-2024	R438	N/A	R168
Fourth amendment of the Backbone Extension.	Openserve (Pty) Ltd - Centurion	Variation	2686/31-07-2024	R35 277	R10 890	R11 578
Provision of external legal services.	MF Jassat Dhlamini	Variation	PO1000827201	R367	N/A	R342
Advance Smart Tracking Technologies.	Ekasilam Technologies (Pty) Ltd	Variation	PO1000864204	R3 000	N/A	R2 070
Maintenance, servicing and supply of diesel for generators for a period of three years.	Buwesi Generators (Pty) Ltd	Expansion	3134.1/20-07-2024	R5 610	N/A	R414

Project description	Name of supplier	Contract modification type (Expansion or Variation)	Contract number	Original contract value	Value of previous contract expansion/s or variation/s (if applicable)	Value of current contract expansion or variation
				R'000	R'000	R'000
Provision of construction services for the refurbishment of second and third floors in Building 43 D at the CSIR.	The Lemba Elephant trading solutions CC	Expansion	3516.1/25-07-2024	R1 939	N/A	R368
Provision of an on-line Safety, Health, Environment, and Quality (SHEQ) tool software programme, including training and ongoing licensing.	Combined Sourced Trading (Pty) Ltd	Variation	3276/31-05-2025	R2 875	N/A	R1 965
Request for the installation of gas lines.	Spovah Group (Pty) Ltd	Variation	PO1000868302	R135	N/A	R70
Consulting services for the assessment of sagging flooring in Building 41.	AJC Advisory Services (Pty) Ltd	Variation	PO1000857326	R28	N/A	R16
Provision of professional legal services to the CSIR by acting as chairperson in an internal disciplinary hearing.	SolomonHolmes Attorneys	Expansion	PO1000869162	R148	N/A	R64
Appointment of a service provider for the provision of Heavy Vehicle Simulator support and data analysis services to the CSIR.	Pavement Engineering Research Consultancy (Pty) Ltd	Variation	PO1000875729	R159	N/A	R114
Provision of seasonal casual labour/temporary staffing solutions to the CSIR ICC.	BetaGroup (Pty) Ltd	Variation	3480/28-02-2026	R4 000	N/A	R4 000
Legal support in a litigation and debt collection matter against BGM Pharmaceuticals.	MF Jassat Dhlamini	Variation	PO1000792897	R68	N/A	R47
Provision of general waste collection, sorting and disposal services at CSIR Gauteng sites.	Wasteplan Gauteng (Pty) Ltd	Expansion	PO1000868923	R874	N/A	R525
Graphic design and layout services for the new Circular Economy Science, Technology and Innovation Strategy.	Creative Vision Graphic Design (Pty) Ltd	Variation	PO1000876068	R30	N/A	R14
Provision of occupational health doctor services to the CSIR Medical Centre for a period of one year.	Moyreg (Pty) Ltd	Expansion	3478/12-02-2025	R611	N/A	R370
Total				**R77 529**	**R10 890**	**R33 141**

PART G
ANNUAL FINANCIAL STATEMENTS

REPORT OF THE AUDITOR-GENERAL TO PARLIAMENT ON THE COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH

REPORT ON THE AUDIT OF THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

Opinion

1. I have audited the consolidated and separate financial statements of the Council for Scientific and Industrial Research and its subsidiary (the group) set out on pages 140 to 190, which comprise the consolidated and separate statement of financial position as at 31 March 2025, consolidated and separate statement of profit or loss and other comprehensive income, consolidated and separate statement of changes in equity and consolidated and separate statement of cash flows for the year then ended, as well as notes to the consolidated and separate financial statements, including material accounting policy information.

2. In my opinion, the consolidated and separate financial statements present fairly, in all material respects, the financial position of the group as at 31 March 2025 and their consolidated and separate financial performance and consolidated and separate cash flows for the year then ended in accordance with the International Financial Reporting Standards (IFRS) and the requirements of the Public Finance Management Act 1 of 1999 (PFMA).

Basis for opinion

3. I conducted my audit in accordance with the International Standards on Auditing (ISAs). My responsibilities under those standards are further described in the responsibilities of the auditor-general for the audit of the consolidated and separate financial statements section of my report.

4. I am independent of the group in accordance with the International Ethics Standards Board for Accountants' *International Code of Ethics for Professional Accountants (including International Independence Standards)* (IESBA code) as well as other ethical requirements that are relevant to my audit in South Africa. I have fulfilled my other ethical responsibilities in accordance with these requirements and the IESBA code.

5. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Responsibilities of the accounting authority for the consolidated and separate financial statements

6. The accounting authority is responsible for the preparation and fair presentation of the consolidated and separate financial statements in accordance with the IFRS and the requirements of the PFMA; and for such internal control as the accounting authority determines is necessary to enable the preparation of consolidated and separate financial statements that are free from material misstatement, whether due to fraud or error.

7. In preparing the consolidated and separate financial statements, the accounting authority is responsible for assessing the group's ability to continue as a going concern; disclosing, as applicable, matters relating to going concern; and using the going concern basis of accounting unless the appropriate governance structure either intends to liquidate the group or to cease operations, or has no realistic alternative but to do so.

Responsibilities of the Auditor-General for the audit of the consolidated and separate financial statements

8. My objectives are to obtain reasonable assurance about whether the consolidated and separate financial statements as a whole are free from material misstatement, whether due to fraud or error; and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with the ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated and separate financial statements.

9. A further description of my responsibilities for the audit of the consolidated and separate financial statements is included in the annexure to this auditor's report. This description, which is located on page 138, forms part of my auditor's report.

REPORT ON THE ANNUAL PERFORMANCE REPORT

10. In accordance with the Public Audit Act 25 of 2004 (PAA) and the general notice issued in terms thereof, I must audit and report on the usefulness and reliability of the reported performance information against predetermined objectives for the selected material performance indicators presented in the annual performance report. The accounting authority is responsible for the preparation of the annual performance report.

REPORT OF THE AUDITOR-GENERAL TO PARLIAMENT ON THE COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH

11. I selected the following material performance indicators related to strategic objective (SO) 1: conduct research, development and innovation of transformative technologies and accelerate their diffusion presented in the annual performance report for the year ended 31 March 2025. I selected those indicators that measure the entity's performance on its primary mandated functions and that are of significant national, community or public interest.
    - Publication equivalents
    - New priority patent applications filed
    - New patents granted
    - New technology demonstrators
    - Number of technology license agreements signed

12. I evaluated the reported performance information for the selected material performance indicators against the criteria developed from the performance management and reporting framework, as defined in the general notice. When an annual performance report is prepared using these criteria, it provides useful and reliable information and insights to users on the group's planning and delivery on its mandate and objectives.

13. I performed procedures to test whether:
    - the indicators used for planning and reporting on performance can be linked directly to the group's mandate and the achievement of its planned objectives
    - all the indicators relevant for measuring the group's performance against its primary mandated and prioritised functions and planned objectives are included
    - the indicators are well defined to ensure that they are easy to understand and can be applied consistently, as well as verifiable so that I can confirm the methods and processes to be used for measuring achievements
    - the targets can be linked directly to the achievement of the indicators and are specific, time bound and measurable to ensure that it is easy to understand what should be delivered and by when, the required level of performance as well as how performance will be evaluated
    - the indicators and targets reported on in the annual performance report are the same as those committed to in the approved initial or revised planning documents
    - the reported performance information is presented in the annual performance report in the prescribed manner
    - there is adequate supporting evidence for the achievements reported and for the reasons provided for any over- or underachievement of targets.

14. I performed the procedures to report material findings only; and not to express an assurance opinion or conclusion.

15. I did not identify any material findings on the reported performance information for the selected indicators.

Other matter

16. I draw attention to the matter below.

Achievement of planned targets

17. The annual performance report includes information on reported achievements against planned targets and provides explanations for over- or underachievements.

REPORT ON COMPLIANCE WITH LEGISLATION

18. In accordance with the PAA and the general notice issued in terms thereof, I must audit and report on compliance with applicable legislation relating to financial matters, financial management and other related matters. The accounting authority is responsible for the entity's compliance with legislation.

19. I performed procedures to test compliance with selected requirements in key legislation in accordance with the findings engagement methodology of the Auditor-General of South Africa (AGSA). This engagement is not an assurance engagement. Accordingly, I do not express an assurance opinion or conclusion.

20. Through an established AGSA process, I selected requirements in key legislation for compliance testing that are relevant to the financial and performance management of the group, clear to allow consistent measurement and evaluation, while also sufficiently detailed

REPORT OF THE AUDITOR-GENERAL TO PARLIAMENT ON THE COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH

and readily available to report in an understandable manner. The selected legislative requirements are included in the annexure to this auditor's report.

21. I did not identify any material non-compliance with the selected legislative requirements.

OTHER INFORMATION IN THE ANNUAL REPORT

22. The accounting authority is responsible for the other information included in the annual report, which includes the accounting authority's report, the audit committee's report and the chief executive officer's report. The other information referred to does not include the consolidated and separate financial statements, the auditor's report and those selected material indicators in the scoped-in strategic objective presented in the annual performance report that have been specifically reported on in this auditor's report.

23. My opinion on the consolidated and separate financial statements and my reports on the audit of the annual performance report and compliance with legislation do not cover the other information included in the annual report and I do not express an audit opinion or any form of assurance conclusion on it.

24. My responsibility is to read this other information and, in doing so, consider whether it is materially inconsistent with the consolidated and separate financial statements and the selected material indicators in the scoped-in objective presented in the annual performance report or my knowledge obtained in the audit, or otherwise appears to be materially misstated.

25. I did not receive final information prior to the date of this auditor's report. When I do receive and read this information, if I conclude that there is a material misstatement therein, I am required to communicate the matter to those charged with governance and request that the other information be corrected. If the other information is not corrected, I may have to retract this auditor's report and re-issue an amended report as appropriate. However, if it is corrected this will not be necessary.

INTERNAL CONTROL DEFICIENCIES

26. I considered internal control relevant to my audit of the consolidated and separate financial statements, annual performance report and compliance with applicable legislation; however, my objective was not to express any form of assurance on it.

27. I did not identify any significant deficiencies in internal control.

Pretoria
30 July 2025

AUDITOR-GENERAL
SOUTH AFRICA

Auditing to build public confidence

REPORT OF THE AUDITOR-GENERAL TO PARLIAMENT ON THE COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH

ANNEXURE TO THE AUDITOR'S REPORT

The annexure includes the following:

- The Auditor-General's responsibility for the audit
- The selected legislative requirements for compliance testing

Auditor-General's responsibility for the audit

Professional judgement and professional scepticism

As part of an audit in accordance with the International Standards on Auditing, I exercise professional judgement and maintain professional scepticism throughout my audit of the consolidated and separate financial statements and the procedures performed on reported performance information for selected material performance indicators and on the group's compliance with selected requirements in key legislation.

Consolidated and separate financial statements

In addition to my responsibility for the audit of the consolidated and separate financial statements as described in this auditor's report, I also:

- identify and assess the risks of material misstatement of the consolidated and separate financial statements, whether due to fraud or error; design and perform audit procedures responsive to those risks; and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the group's internal control
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made
- conclude on the appropriateness of the use of the going concern basis of accounting in the preparation of the consolidated and separate financial statements. I also conclude, based on the audit evidence obtained, whether a material uncertainty exists relating to events or conditions that may cast significant doubt on the ability of the group and its subsidiary to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the consolidated and separate financial statements about the material uncertainty or, if such disclosures are inadequate, to modify my opinion on the consolidated and separate financial statements. My conclusions are based on the information available to me at the date of this auditor's report. However, future events or conditions may cause the group to cease operating as a going concern
- evaluate the overall presentation, structure and content of the consolidated and separate financial statements, including the disclosures, and determine whether the consolidated and separate financial statements represent the underlying transactions and events in a manner that achieves fair presentation
- plan and perform the group audit to obtain sufficient appropriate audit evidence regarding the financial information of the entities or business units within the group as a basis for forming an opinion on the group financial statements. I am responsible for the direction, supervision and review of audit work performed for purposes of the group audit. I remain solely responsible for my audit opinion.

Communication with those charged with governance

I communicate with the accounting authority regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I also provide the accounting authority with a statement that I have complied with relevant ethical requirements regarding independence and communicate with them all relationships and other matters that may reasonably be thought to bear on my independence and, where applicable, actions taken to eliminate threats or safeguards applied.

REPORT OF THE AUDITOR-GENERAL TO PARLIAMENT ON THE COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH

Compliance with legislation – selected legislative requirements

The selected legislative requirements are as follows:

Legislation	Sections or regulations
Public Finance Management Act 1 of 1999	Sections 50(3)(b); 51(1)(a)(iii); 51(1)(b)(i); 51(1)(b)(ii); 51(1)(e)(iii); 52(b); 54(2)(c); 54(2)(d); 55(1)(a); 55(1)(b); (1)(c)(i); 56; 57(b); 57(d)
Treasury Regulations, 2005	Regulations 29.1.1; 29.1.1(a); 29.1.1(c); 29.2.1; 29.2.2; 29.3.1; 31.1.2(c); 33.1.1; 33.1.3
Companies Act 71 of 2008	Sections 45(2); 45(3)(a)(ii); 45(3)(b)(i); 45(3)(b)(ii); 45(4); 46(1)(a); 46(1)(b); 46(1)(c); 112(2)(a); 129(7)
Construction Industry Development Board Act 38 of 2000	Section 18(1)
Construction Industry Development Board Regulations, 2004	Regulations 17; 25(7A)
Erratum National Treasury Instruction No. 5 of 2020/21	Paragraph 1
Erratum National Treasury Instruction No. 5 of 2020/21	Paragraph 2
National Treasury Instruction No. 4 of 2015/16	Paragraph 3.4
National Treasury Instruction No. 5 of 2020/21	Paragraphs 4.8; 4.9; 5.3
National Treasury SCM Instruction No. 3 of 2021/22	Paragraph 4.2
National Treasury SCM Instruction No. 11 of 2020/21	Paragraphs 3.1; 3.4(b); 3.9
Preferential Procurement Policy Framework Act 5 of 2000	Sections 1; 2.1(a); 2.1(f)
Preferential Procurement Regulations, 2022	Regulations 4.1; 4.2; 4.3; 4.4; 5.1; 5.2; 5.3; 5.4
Preferential Procurement Regulations, 2017	Regulations 4.1; 4.2; 5.1; 5.3; 5.6; 5.7; 6.1; 6.2; 6.3; 6.5; 6.6; 6.8; 7.1; 7.2; 7.3; 7.5; 7.6; 7.8; 8.2; 8.5; 9.1; 10.1; 10.2; 11.1; 11.2
Prevention and Combating of Corrupt Activities Act 12 of 2004	Section 34(1)

STATEMENTS OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

FOR THE YEAR ENDED 31 MARCH 2025

	Notes	GROUP 2025 R'000	GROUP 2024 R'000	CSIR 2025 R'000	CSIR 2024 R'000
Revenue	2	3,540,072	3,150,678	3,540,072	3,150,678
Other income	3	3,424	28,061	3,424	28,061
Total operating income		**3,543,496**	**3,178,739**	**3,543,496**	**3,178,739**
Expenses					
Employees' remuneration		(1,987,935)	(1,803,811)	(1,987,798)	(1,803,811)
Depreciation		(50,496)	(45,701)	(50,496)	(45,701)
Operating expenses		(1,548,227)	(1,361,373)	(1,546,976)	(1,362,986)
Operating loss	4	**(43,162)**	**(32,146)**	**(41,774)**	**(33,759)**
Finance income	5	102,878	71,675	102,285	71,114
Finance expense	6	(19,888)	(887)	(19,888)	(887)
Share of profit/(loss) of joint ventures and associates		1,191	(1,668)	-	-
Profit for the year		**41,019**	**36,974**	**40,623**	**36,468**
Other comprehensive income:					
Items that will not be reclassified to profit or loss:					
Remeasurement of post-retirement medical benefit obligation		181	1,182	181	1,182
Revaluation of land	8	48,933	-	48,933	-
Total items that will not be reclassified to profit or loss		**49,114**	**1,182**	**49,114**	**1,182**
Items that may be reclassified to profit or loss:					
Gains on valuation of investments in debt instruments		14,807	2,746	14,807	2,746
Other comprehensive income for the year		**63,921**	**3,928**	**63,921**	**3,928**
Total comprehensive income for the year		**104,940**	**40,902**	**104,544**	**40,396**

STATEMENTS OF FINANCIAL POSITION

AS AT 31 MARCH 2025

	Notes	GROUP 2025 R'000	GROUP 2024 R'000	CSIR 2025 R'000	CSIR 2024 R'000
ASSETS					
Non-Current Assets					
Property, plant and equipment	8	886,498	808,228	886,498	808,228
Right-of-use assets	9	5,254	7,978	5,254	7,978
Interest in subsidiaries	10	-	-	4,650	4,650
Interests in joint venture and associate	11	-	-	-	-
Government grant receivable	12	158,279	-	158,279	-
		1,050,031	**816,206**	**1,054,681**	**820,856**
Current Assets					
Government grant receivable	12	63,009	-	63,009	-
Inventories	13	676	737	676	737
Other receivables from contracts with customers	14	200,112	193,329	200,112	193,329
Trade and other receivables	15	428,489	402,486	428,487	402,461
Contract assets	16	2,992	4,856	2,992	4,856
Investments at fair value through other comprehensive income	18	656,649	587,752	656,649	587,752
Cash and cash equivalents	19	545,666	737,291	536,099	728,143
		1,897,593	**1,926,451**	**1,888,024**	**1,917,278**
TOTAL ASSETS		**2,947,624**	**2,742,657**	**2,942,705**	**2,738,134**
EQUITY AND LIABILITIES					
EQUITY					
Reserves		216,168	152,428	216,168	152,428
Retained income		1,211,805	1,170,605	1,206,872	1,166,068
		1,427,973	**1,323,033**	**1,423,040**	**1,318,496**
LIABILITIES					
Non-Current Liabilities					
Lease liabilities	9	4,207	5,447	4,207	5,447
Post-retirement medical benefits	20	10,547	9,770	10,547	9,770
Long-term payables	21	158,279	-	158,279	-
		173,033	**15,217**	**173,033**	**15,217**
Current Liabilities					
Lease liabilities	9	2,950	2,817	2,950	2,817
Post-retirement medical benefits	20	2,228	2,055	2,228	2,055
Trade and other payables	22	337,716	350,629	337,730	350,643
Advances from customers	23	828,827	974,410	828,827	974,410
Provisions	24	111,888	74,496	111,888	74,496
Long-term payables	21	63,009	-	63,009	-
		1,346,618	**1,404,407**	**1,346,632**	**1,404,421**
TOTAL LIABILITIES		**1,519,651**	**1,419,624**	**1,519,665**	**1,419,638**
TOTAL EQUITY AND LIABILITIES		**2,947,624**	**2,742,657**	**2,942,705**	**2,738,134**

STATEMENTS OF CHANGES IN EQUITY

FOR THE YEAR ENDED 31 MARCH 2025

	Revaluation reserve	Reserve for valuation of investments	Total reserves	Retained income	Total equity
	R'000	R'000	R'000	R'000	R'000
GROUP					
Balance at 1 April 2023	**133,571**	**16,111**	**149,682**	**1,132,449**	**1,282,131**
Profit for the year	-	-	-	36,974	36,974
Other comprehensive income	-	2,746	2,746	1,182	3,928
Total comprehensive income for the year	**-**	**2,746**	**2,746**	**38,156**	**40,902**
Balance at 1 April 2024	**133,571**	**18,857**	**152,428**	**1,170,605**	**1,323,033**
Profit for the year	-	-	-	41,019	41,019
Other comprehensive income	48,933	14,807	63,740	181	63,921
Total comprehensive income for the year	**48,933**	**14,807**	**63,740**	**41,200**	**104,940**
Balance at 31 March 2025	**182,504**	**33,664**	**216,168**	**1,211,805**	**1,427,973**
CSIR					
Balance at 1 April 2023	**133,571**	**16,111**	**149,682**	**1,128,418**	**1,278,100**
Profit for the year	-	-	-	36,468	36,468
Other comprehensive income	-	2,746	2,746	1,182	3,928
Total comprehensive income for the year	**-**	**2,746**	**2,746**	**37,650**	**40,396**
Balance at 1 April 2024	**133,571**	**18,857**	**152,428**	**1,166,068**	**1,318,496**
Profit for the year	-	-	-	40,623	40,623
Other comprehensive income	48,933	14,807	63,740	181	63,921
Total comprehensive income for the year	**48,933**	**14,807**	**63,740**	**40,804**	**104,544**
Balance at 31 March 2025	**182,504**	**33,664**	**216,168**	**1,206,872**	**1,423,040**

STATEMENTS OF CASH FLOWS

FOR THE YEAR ENDED 31 MARCH 2025

	Notes	GROUP		CSIR	
		2025	2024	2025	2024
		R'000	R'000	R'000	R'000
Cash flows from operating activities					
Cash receipts from external customers		2,537,226	2,443,356	2,537,226	2,443,356
Parliamentary Grant received	2	679,721	714,308	679,721	714,308
Cash paid to suppliers and employees		(3,359,722)	(3,230,350)	(3,359,525)	(3,230,335)
Cash utilised in operating activities	25	(142,775)	(72,686)	(142,578)	(72,671)
Finance income received		30,561	25,544	29,945	25,006
Finance expense paid		-	-	-	-
Net cash outflow from operating activities		**(112,214)**	**(47,142)**	**(112,633)**	**(47,665)**
Cash flows from investing activities					
Acquisition of property, plant and equipment	8	(77,662)	(66,439)	(77,662)	(66,439)
Proceeds on disposal of property, plant and equipment		576	1,680	576	1,680
Movement in investments at fair value through profit and loss	17	-	152,129	-	152,129
Movement in debt investments at fair value through other comprehensive income		-	200,000	-	200,000
Acquisition of government grant funded property, plant and equipment on deferred payment terms	21	(69,401)	-	(69,401)	-
Net cash (out)/in flow from investing activities		**(146,487)**	**287,370**	**(146,487)**	**287,370**
Cash flows from financing activities					
Payment received on long-term government grant receivable	12	69,401	-	69,401	-
Payment on lease liabilities	29	(2,566)	(2,440)	(2,566)	(2,440)
Net cash in/(out) flow from financing activities		**66,835**	**(2,440)**	**66,835**	**(2,440)**
Unrealised exchange gains/(losses) on foreign cash balances		241	(536)	241	(536)
Net (decrease)/increase in cash and cash equivalents		**(191,625)**	**237,252**	**(192,044)**	**236,729**
Cash and cash equivalents at the beginning of the year		737,291	500,039	728,143	491,414
Cash and cash equivalents at the end of the year	19	**545,666**	**737,291**	**536,099**	**728,143**

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

FOR THE YEAR ENDED 31 MARCH 2025

ENTITY INFORMATION

The CSIR is a national government business enterprise (enacted by The Scientific Research Council Act, 1988 (Act 46 of 1988) as amended by Act 71 of 1990) domiciled in the Republic of South Africa. The address of the CSIR's principal place of business is Meiring Naudé Road, Brummeria, Pretoria. The CSIR undertakes directed and particularly multi-disciplinary research and technological innovation, to foster, in the national interest and in fields which in its opinion should receive preference, industrial and scientific development, either by itself or in co-operation with principals from the private or public sectors, and thereby to contribute to the improvement of the quality of life of the people of the Republic.

The consolidated financial statements of the Group as at and for the year ended 31 March 2025 comprise the entity and its subsidiaries (together referred to as the Group) and the Group's interest in associates and jointly controlled entities.

1. SIGNIFICANT ACCOUNTING POLICIES

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below.

1.1 Basis of preparation

The consolidated financial statements have been prepared on the going concern basis in accordance with, and in compliance with, International Financial Reporting Standards ("IFRS® Accounting Standards") and International Financial Reporting Interpretations Committee Interpretations ("IFRIC® Interpretations") issued and effective at the time of preparing these consolidated financial statements, and the Public Finance Management Act, 1999 (Act 1 of 1999) as amended by Act 29 of 1999.

The consolidated financial statements have been prepared on the historic cost convention, unless otherwise stated. They are presented in South African Rand (R), which is the Group and entity's functional currency.

The Group has consistently applied the following accounting policies to all periods presented in these consolidated financial statements, except if mentioned otherwise.

1.2 Consolidation

Basis of consolidation

The consolidated financial statements incorporate the separate financial statements of the CSIR and all subsidiaries. Subsidiaries are entities (including structured entities) which are controlled by the Group.

The Group has control of an entity when it is exposed to or has rights to variable returns from its involvement with the entity and it has the ability to affect those returns through the use of its power over the entity.

The results of subsidiaries are included in the consolidated financial statements from the effective date of control to the effective date of loss of control.

All inter-company transactions, balances, and unrealised gains on transactions between Group companies are eliminated in full on consolidation. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred.

Investments in subsidiaries in the separate financial statements

In the CSIR's separate financial statements, investments in subsidiaries are carried at cost less any accumulated impairment losses.

1.3 Joint arrangements

A joint arrangement is an arrangement where two or more parties have joint control. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control. A joint arrangement is classified either as a joint operation or a joint venture.

1.3 Joint arrangements (continued)

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement. The Group has assessed the nature of its joint arrangement and determined it to be a joint venture.

Refer to 1.12 for the accounting policy on impairment of joint arrangements.

Joint ventures

An interest in a joint venture is accounted for using the equity method. Under the equity method, interests in joint ventures are carried in the Statements of Financial Position at cost, adjusted for post-acquisition changes in the Group's share of net assets of the joint venture, less any impairment losses.

The Group's share of post-acquisition profit or loss is recognised in profit or loss, and its share of movements in other comprehensive income is recognised in other comprehensive income with a corresponding adjustment to the carrying amount of the investment. Losses in a joint venture in excess of the Group's interest in that joint venture, including any other unsecured losses, are recognised only to the extent that the Group has incurred a legal or constructive obligation to make payments on behalf of the joint venture.

Gains or losses on transactions between the Group and a joint venture are eliminated to the extent of the Group's interest therein. Unrealised losses are eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of joint ventures have been changed where necessary to ensure consistency with the policies adopted by the Group.

Investments in joint ventures in the separate financial statements

In the CSIR's separate financial statements, investments in joint ventures are carried at cost less any accumulated impairment losses.

1.4 Investments in associates

An associate is an entity over which the Group has significant influence, and which is neither a subsidiary nor a joint arrangement. Significant influence is the power to participate in the financial and operating policy decisions of the investee but has no control or joint control over those policies. It generally accompanies a shareholding of between 20% and 50% of the voting rights.

Investments in associates are accounted for using the equity method. Under the equity method, investments in associates are carried in the Statements of Financial Position at cost, adjusted for post-acquisition changes in the Group's share of net assets of the associate, less any impairment losses.

The Group's share of post-acquisition profit or loss is recognised in profit or loss, and its share of movements in other comprehensive income is recognised in other comprehensive income with a corresponding adjustment to the carrying amount of the investment. Losses in an associate in excess of the Group's interest in that associate, including any other unsecured losses, are recognised only to the extent that the Group has incurred a legal or constructive obligation to make payments on behalf of the associate.

Gains or losses on transactions between the Group and an associate are eliminated to the extent of the Group's interest therein. Unrealised losses are eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of associates have been changed where necessary to ensure consistency with the policies adopted by the Group.

Refer to 1.12 for the accounting policy on impairment of associates.

Investments in associates in the separate financial statements

In the CSIR's separate financial statements, investments in associates are carried at cost less any accumulated impairment losses.

1.5 Significant judgements and sources of estimation uncertainty

The preparation of consolidated financial statements in conformity with IFRS Accounting Standards requires management, from time to time, to make judgements, estimates and assumptions that affect the application of policies and reported amounts of assets, liabilities, income and expenses. These estimates and associated assumptions are based on experience and various other factors that are believed to be reasonable under the circumstances. Actual results may differ from these estimates. The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimates are revised and in any future periods affected.

Critical judgements in applying accounting policies

The critical judgements made by management in applying accounting policies, apart from those involving estimations, that have the most significant effect on the amounts recognised in the financial statements, are outlined as follows:

Revenue recognition

The nature of the CSIR's business is varied, in that there are contracts with customers which give rise to single performance obligations, and others which give rise to multiple performance obligations. Judgement is applied in the determination of distinct performance obligations, as well as to when transfer of control of the identified performance obligations is satisfied.

In identifying distinct performance obligations, judgement was applied in assessing whether certain deliverables are separately identifiable from other items to be transferred to the customer in terms of the contract.

Key sources of estimation uncertainty

Impairment of financial assets

The loss allowance for doubtful accounts in trade and other receivables is based on assumptions about risk of default and expected loss rates. The Group uses judgement in making these assumptions and selecting the inputs to the calculation of the loss allowance for doubtful accounts, based on the expected credit loss model (used in IFRS 9).

Impairment testing: Property, plant and equipment

At each reporting date, property, plant and equipment in use are assessed for impairment. To assess whether any impairment exists, estimates of expected future cash flows are used. Actual outcomes could vary significantly from such estimates. Factors such as changes in discount rates, the planned use of buildings, machinery or equipment or closure of facilities and technical obsolescence could lead to shorter useful lives or impairment.

Useful lives of property, plant and equipment

Management assesses the appropriateness of the useful lives of property, plant and equipment at the end of each reporting period. The useful lives of vehicles, furniture and fixtures, IT equipment and equipment are determined based on Group replacement policies for the various assets.

When the estimated useful life of an asset differs from previous estimates, the change is applied prospectively in the determination of the depreciation charge.

Provisions

Provisions are inherently based on assumptions and estimates using the best information available. Additional disclosure of these estimates of provisions are included in note 24.

Estimates of post-retirement medical benefit liabilities

An actuarial valuation is carried out at the end of each financial year for the post-retirement medical benefit liabilities of the Group. Key assumptions used to determine the net assets and liabilities of these obligations and their sensitivities are set out in note 20.

1.6 Property, plant and equipment

Property, plant and equipment are tangible assets which the Group holds for its own use or for rental to others and which are expected to be used for more than one year.

An item of property, plant and equipment is recognised as an asset when it is probable that future economic benefits associated with the item will flow to the Group, and the cost of the item can be measured reliably.

Property, plant and equipment is initially measured at cost. Cost includes all of the expenditure which is directly attributable to the acquisition or construction of the asset.

Expenditure incurred subsequently for major services, additions to or replacements of parts of property, plant and equipment are capitalised if it is probable that future economic benefits associated with the expenditure will flow to the Group and the cost can be measured reliably. The carrying amount of those parts that are replaced is derecognised. Day-to-day servicing costs are included in profit or loss in the year in which they are incurred.

Major inspection costs which are a condition of continuing use of an item of property, plant and equipment and which meet the recognition criteria are included as a replacement in the cost of the item of property, plant and equipment. Any remaining inspection costs from the previous inspection are derecognised.

Major spare parts and standby equipment which are expected to be used for more than one year are included in property, plant and equipment.

Property, plant and equipment is subsequently stated at cost less accumulated depreciation and any accumulated impairment losses, except for land which is stated at its revalued amount less any accumulated impairment losses.

Increases in the carrying amounts arising on the revaluation of land are recognised in other comprehensive income and shown in the revaluation reserve in the Statements of Changes in Equity. In the event of a sale of land, any balance in the reserves in relation to that land is transferred to retained income.

Depreciation of an asset commences when the asset is available for use as intended by management. Depreciation is charged to write off the asset's carrying amount over its estimated useful life to its estimated residual value, using a method that best reflects the pattern in which the asset's economic benefits are consumed by the Group. Leased assets are depreciated in a consistent manner over the shorter of their expected useful lives and the lease term. Depreciation is not charged to an asset if its estimated residual value exceeds or is equal to its carrying amount. Depreciation of an asset ceases at the earlier of the date that the asset is classified as held for sale, or derecognised.

The depreciation methods and assessed useful lives of items of property, plant and equipment are as follows:

Item	Depreciation method	Average useful life
Buildings	Straight line	90 years
Furniture and fixtures	Straight line	3 to 20 years
Vehicles	Straight line	10 years
Equipment	Straight line	3 to 20 years
IT equipment	Straight line	3 to 5 years
Land	Straight line	Indefinite

The residual value, useful life and depreciation method of assets are reviewed at the end of each reporting year. If the expectations differ from previous estimates, the change is accounted for prospectively as a change in accounting estimate.

Each part of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the item is depreciated separately.

1.6 Property, plant and equipment (continued)

Where a significant part of an item of property, plant and equipment has a useful life and a depreciation method that is the same as the useful life and the depreciation method of another significant part of that same item, such parts are grouped in determining the depreciation charge.

The depreciation charge for each year is recognised in profit or loss unless it is included in the carrying amount of another asset.

Impairment tests are performed on property, plant and equipment when there is an indicator that they may be impaired. When the carrying amount of an item of property, plant and equipment is assessed to be higher than the estimated recoverable amount, an impairment loss is recognised immediately in profit or loss to bring the carrying amount in line with the recoverable amount.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected from its continued use or disposal. Any gain or loss arising from the derecognition of an item of property, plant and equipment, determined as the difference between the net disposal proceeds, if any, and the carrying amount of the item, is included in profit or loss when the item is derecognised.

Capital commitments

Capital commitments disclosed in the consolidated financial statements represent amounts associated with binding agreements that the Group has entered into with other parties for the acquisition of property, plant and equipment, that will be incurred in periods after the current reporting date.

Capital commitments are disclosed but not recognised as liabilities in the current reporting period.

1.7 Financial instruments

Financial instruments held by the Group are classified in accordance with the provisions of IFRS 9 Financial Instruments. Broadly, the applicable classification possibilities, which are adopted by the Group, are as follows:

Financial assets that are debt instruments:

- Amortised cost. (This classification applies only when the contractual terms of the instrument give rise, on specified dates, to cash flows that are solely payments of principal and interest on principal, and where the instrument is held under a business model whose objective is met by holding the instrument to collect contractual cash flows).
- Fair value through other comprehensive income. (This classification applies only when the contractual terms of the instrument give rise, on specified dates, to cash flows that are solely payments of principal and interest on principal, and the instrument is held under a business model whose objective is achieved by both collecting contractual cash flows and selling the instruments).
- Fair value through profit or loss. (This classification automatically applies to all debt instruments that do not qualify as at amortised cost or at fair value through other comprehensive income).

Financial liabilities:

- Amortised cost

The financial instruments and risk management note (note 28) presents the financial instruments held by the Group based on their specific classifications.

All regular way purchases or sales of financial assets are recognised and derecognised on a trade date basis. Regular way purchases or sales are purchases or sales of financial assets that require the delivery of assets within the time frame established by regulation or convention in the marketplace.

The specific accounting policies for the classification, recognition and measurement of each type of financial instrument held by the Group are presented on the following page.

1.7 Financial instruments (continued)

Debt instruments at fair value through other comprehensive income

Classification

Certain investments in debt instruments are classified as at fair value through other comprehensive income. This classification applies when the debt instrument meets both the following conditions and is not designated as at fair value through profit or loss:

- it is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets; and
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

The Group holds investments in debt instruments (flexible income fund) which are classified as at fair value through other comprehensive income (note 18).

Recognition and measurement

These debt instruments are recognised when the Group becomes a party to the contractual provisions. They are measured, at initial recognition, at fair value plus transaction costs, if any.

They are subsequently measured at fair value.

Even though they are measured at fair value, the Group determines the amortised cost of each instrument as if they were measured at amortised cost. The difference, at reporting date, between the amortised cost and the fair value of the debt instruments, is recognised in other comprehensive income and accumulated in equity in the reserve for valuation of investments.

The amortised cost is the amount recognised on the instrument initially, minus principal repayments, plus cumulative amortisation (interest) using the effective interest method of any difference between the initial amount and the maturity amount, adjusted for any loss allowance.

Impairment

The Group assesses on a forward-looking basis the expected credit losses associated with its debt instruments carried at fair value through other comprehensive income. The impairment methodology applied depends on whether there has been a significant increase in credit risk.

At each reporting date, the Group assesses whether debt instruments at fair value through other comprehensive income are credit-impaired. A financial asset is "credit-impaired" when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred.

The loss allowance is charged to profit or loss.

If the financial instrument is determined to have low credit risk at the reporting date, the Group assumes that the credit risk on a financial instrument has not increased significantly since initial recognition.

Derecognition

Refer to the derecognition section of the accounting policy for the policies and processes related to derecognition.

Trade and other receivables

Classification

Trade and other receivables, excluding, when applicable, VAT and prepayments, are classified as financial assets subsequently measured at amortised cost (note 15).

They have been classified in this manner because their contractual terms give rise, on specified dates to cash flows that are solely payments of principal and interest on the principal outstanding. The Group's business model is to collect the contractual cash flows on trade and other receivables.

1.7 Financial instruments (continued)

Recognition and measurement

Trade and other receivables are recognised when the Group becomes a party to the contractual provisions of the receivables. They are measured, at initial recognition, at transaction price.

They are subsequently measured at amortised cost.

The amortised cost is the amount recognised on the receivable initially, minus principal repayments, plus cumulative amortisation (interest) using the effective interest method of any difference between the initial amount and the maturity amount, adjusted for any loss allowance.

Trade and other receivables denominated in foreign currency

When trade and other receivables are denominated in a foreign currency, the carrying amount of the receivables are determined in the foreign currency. The carrying amount is then translated to the Rand equivalent using the spot rate at the end of each reporting period. Any resulting foreign exchange gains or losses are recognised in profit or loss.

Details of foreign currency risk exposure and the management thereof are provided in the financial instruments and risk management note (note 28).

Impairment

The Group recognises a loss allowance for expected credit losses on trade and other receivables, excluding VAT and prepayments. The amount of expected credit losses is updated at each reporting date.

The Group measures the loss allowance for trade and other receivables at an amount equal to lifetime expected credit losses (lifetime ECL), which represents the expected credit losses that will result from all possible default events over the expected life of the receivable.

Measurement and recognition of expected credit losses

The Group applies the simplified approach to trade receivables, contract assets and lease receivables of measuring the loss allowance at an amount equal to lifetime expected credit losses in terms of IFRS 9. The Group applies the ECL valuation model as follows:

- It rebuts the more than 30 days past due presumption. Instead, the CSIR presumes that there is a significant increase in credit risk when payments are more than 90 days outstanding from dates of invoices. Based on historical experience for most of the CSIR's debtors if contractual payments become more than 30 days past due, this does not represent a significant increase in the credit risk of a financial instrument. It is rather due to their extensive administrative systems for local debtors, or timing differences in moving money outside of the borders of their countries for international customers instead of financial difficulty of the debtors.
- When a receivable (i.e. an invoice) is more than 90 days outstanding, an allowance for loss is raised for 100% of the outstanding amount excluding VAT (thus a 100% loss probability is assumed). However, no allowance is raised when there is a firm commitment by the debtor that they will settle the amount due even if the receivable is more than 90 days outstanding.
- An allowance for loss is raised even if a receivable (invoice) is less than 90 days outstanding when there is evidence indicating a significant increase in credit risk of a debtor.

Write off policy

The Group writes off a receivable when there is information indicating that the counterparty is in severe financial difficulty and there is no realistic prospect of recovery, e.g. when the counterparty has been placed under liquidation or has entered into bankruptcy proceedings. Receivables written off may still be subject to enforcement activities under the Group recovery procedures, taking into account legal advice where appropriate. Any recoveries made are recognised in profit or loss.

Credit risk

Details of credit risk are included in the trade and other receivables note (note 15) and the financial instruments and risk management note (note 28).

1.7 Financial instruments (continued)

Derecognition

Refer to the derecognition section of the accounting policy for the policies and processes related to derecognition.

Investments in debt instruments at fair value through profit or loss

Classification

Certain investments in debt instruments are classified as mandatorily at fair value through profit or loss. These investments do not qualify for classification at amortised cost or at fair value through other comprehensive income because either the contractual terms of these instruments do not give rise, on specified dates to cash flows that are solely payments of principal and interest on the principal outstanding, or the objectives of the Group's business model are met by selling the instruments rather than holding them to collect the contractual cash flows. The Group held investments in Index Linked Notes (note 17), which were at fair value through profit or loss.

Recognition and measurement

Investments in debt instruments at fair value through profit or loss are recognised when the Group becomes a party to the contractual provisions of the instrument. The investments are measured, at initial recognition and subsequently, at fair value. Transaction costs are recognised in profit or loss.

Fair value gains or losses are included in other income (note 3).

Impairment

Investments in debt instruments at fair value through profit or loss are not subject to impairment provisions.

Derecognition

Refer to the derecognition section of the accounting policy for the policies and processes related to derecognition.

Trade and other payables (including long-term payables)

Classification

Trade and other payables (note 22) and long-term payables (note 21), excluding VAT and amounts received in advance, are classified as financial liabilities subsequently measured at amortised cost.

Recognition and measurement

They are recognised when the Group becomes a party to the contractual provisions, and are measured, at initial recognition, at fair value plus transaction costs, if any.

Trade and other payables are subsequently measured at amortised cost using the effective interest method.

Trade and other payables expose the Group to liquidity risk and possibly to interest rate risk. Refer to note 28 for details of risk exposure and management thereof.

Trade and other payables denominated in foreign currencies

When trade payables are denominated in a foreign currency, the carrying amount of the payables are determined in the foreign currency. The carrying amount is then translated to the Rand equivalent using the spot rate at the end of each reporting period. Any resulting foreign exchange gains or losses are recognised in profit or loss.

Details of foreign currency risk exposure and the management thereof are provided in the financial instruments and risk management note (note 28).

Derecognition

Refer to the derecognition section of the accounting policy for the policies and processes related to derecognition.

1.7 Financial instruments (continued)

Financial guarantee contracts

A financial guarantee contract is a contract that requires the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payments when due in accordance with the terms of a debt instrument.

Financial guarantee contracts issued by the Group are initially measured at their fair values and, if not designated as at fair value through profit or loss and do not arise from a transfer of a financial asset, are subsequently measured at the higher of:

- The amount of the loss allowance determined in accordance with IFRS 9; and
- The amount initially recognised less, where appropriate, cumulative amount of income recognised in accordance with the revenue recognition policies.

Refer to note 34 for details of financial guarantee contracts.

Cash and cash equivalents

Cash and cash equivalents comprise cash on hand and demand deposits, and other short-term highly liquid investments that are readily convertible to a known amount of cash, are subject to an insignificant risk of changes in value, and are held for the purpose of meeting short-term cash commitments rather than for investment or other purposes.

Cash and cash equivalents are initially and subsequently recorded at amortised cost, which approximates fair value.

Cash and cash equivalents denominated in foreign currency

When cash and cash equivalents are denominated in a foreign currency, the carrying amount of the cash and cash equivalents are determined in the foreign currency. The carrying amount is then translated to the Rand equivalent using the spot rate at the end of each reporting period. Any resulting foreign exchange gains or losses are recognised in profit or loss.

Details of foreign currency risk exposure and the management thereof are provided in the financial instruments and risk management note (note 28).

Derecognition

Financial assets

The Group derecognises a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another party. If the Group neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Group recognises its retained interest in the asset and an associated liability for amounts it may have to pay. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognise the financial asset and also recognises a collateralised borrowing for the proceeds received.

On derecognition of a financial asset in its entirety, the difference between the carrying amount (measured at the date of derecognition) and the consideration received, is recognised in profit or loss.

On derecognition of a debt instrument at fair value through other comprehensive income, the cumulative gain or loss on that instrument which was previously accumulated in equity in the reserve for valuation of investments is reclassified to profit or loss.

Financial liabilities

The Group derecognises financial liabilities when, and only when, the Group's obligations are discharged, cancelled or they expire. The difference between the carrying amount of the financial liability derecognised and the consideration paid and payable, including any non-cash assets transferred or liabilities assumed, is recognised in profit or loss.

1.8 Tax

Income tax

The CSIR is exempt from South African income tax in terms of section 10(1)(t)(i) of the Income Tax Act, 1962 (Act 58 of 1962). The income tax expense or assessed loss of subsidiary companies is reflected at Group level.

1.9 Leases

The Group assesses whether a contract is, or contains a lease, at the inception of the contract.

A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

In order to assess whether a contract is, or contains a lease, management determines whether the asset under consideration is "identified", which means that the asset is either explicitly or implicitly specified in the contract and that the supplier does not have a substantial right of substitution throughout the period of use. Once management has concluded that the contract deals with an identified asset, the right to control the use thereof is considered. To this end, control over the use of an identified asset only exists when the Group has the right to substantially all of the economic benefits from the use of the asset as well as the right to direct the use of the asset. In circumstances where the determination of whether the contract is or contains a lease requires significant judgement, the relevant disclosures are provided in the significant judgements and sources of estimation uncertainty section of these accounting policies.

Group as lessee

A lease liability and corresponding right-of-use asset are recognised at the lease commencement date, for all lease agreements for which the Group is a lessee, except for short-term leases of 12 months or less, or leases of low value assets. For these leases, the Group recognises the lease payments as an operating expense on a straight-line basis over the term of the lease unless another systematic basis is more representative of the time pattern in which economic benefits from the leased asset are consumed.

The various lease and non-lease components of contracts containing leases are accounted for separately, with consideration being allocated to each lease component on the basis of the relative stand-alone prices of the lease components and the aggregate stand-alone price of the non-lease components (where non-lease components exist).

However, as an exception to the preceding paragraph, the Group has elected not to separate the non-lease components for leases of land and buildings.

Details of leasing arrangements where the Group is a lessee are presented in note 9.

Lease liability

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted by using the rate implicit in the lease. If this rate cannot be readily determined, the Group uses its incremental borrowing rate.

Lease payments included in the measurement of the lease liability comprise the following:

- Fixed lease payments, including in-substance fixed payments, less any lease incentives;
- Variable lease payments that depend on an index or rate, initially measured using the index or rate at the commencement date;
- The amount expected to be payable by the Group under residual value guarantees;
- The exercise price of purchase options, if the Group is reasonably certain to exercise the option;
- Lease payments in an optional renewal period if the Group is reasonably certain to exercise an extension option; and
- Penalties for early termination of a lease, if the lease term reflects the exercise of an option to terminate the lease.

Variable lease payments that do not depend on an index or rate are not included in the measurement of the lease liability (or right-of-use asset). The related payments are recognised as an expense in the period incurred and are included in operating expenses.

The lease liability is presented as a separate line item in the Statements of Financial Position.

1.9 Leases (continued)

The lease liability is subsequently measured by increasing the carrying amount to reflect interest on the lease liability (using the effective interest method) and by reducing the carrying amount to reflect lease payments made. Interest charged on the lease liability is included in finance expense (note 6).

The Group remeasures the lease liability (and makes a corresponding adjustment to the related right-of-use asset) when:

- There has been a change to the lease term, in which case the lease liability is remeasured by discounting the revised lease payments using a revised discount rate;
- There has been a change in the assessment of whether the Group will exercise a purchase, termination or extension option, in which case the lease liability is remeasured by discounting the revised lease payments using a revised discount rate;
- There has been a change to the lease payments due to a change in an index or a rate, in which case the lease liability is remeasured by discounting the revised lease payments using the initial discount rate (unless the lease payments change is due to a change in a floating interest rate, in which case a revised discount rate is used);
- There has been a change in expected payment under a residual value guarantee, in which case the lease liability is remeasured by discounting the revised lease payments using the initial discount rate;
- A lease contract has been modified and the lease modification is not accounted for as a separate lease, in which case the lease liability is remeasured by discounting the revised payments using a revised discount rate.

When the lease liability is remeasured in this way, a corresponding adjustment is made to the carrying amount of the right-of- use asset, or is recognised in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

Right-of-use assets

Right-of-use assets are presented as a separate line item in the Statements of Financial Position. Lease payments included in the measurement of the right-of-use assets comprise the following:

- The initial amount of the corresponding lease liability;
- Any lease payments made at or before the commencement date;
- Any initial direct costs incurred;
- Any estimated costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, when the Group incurs an obligation to do so, unless these costs are incurred to produce inventories; and
- Less any lease incentives received.

Right-of-use assets are subsequently measured at cost less accumulated depreciation and impairment losses.

Right-of-use assets are depreciated over the shorter period of the lease term and useful life of the underlying asset. However, if a lease transfers ownership of the underlying asset or the cost of the right-of-use asset reflects that the Group expects to exercise a purchase option, the related right-of-use asset is depreciated over the useful life of the underlying asset. Depreciation starts at the commencement date of a lease.

For right-of-use assets which are depreciated over their useful lives, the useful lives are determined consistently with items of the same class of property, plant and equipment. Refer to the accounting policy for property, plant and equipment for details of useful lives.

The residual value, useful life and depreciation method of assets are reviewed at the end of each reporting year. If the expectations differ from previous estimates, the change is accounted for prospectively as a change in accounting estimate. Each part of a right-of-use asset with a cost that is significant in relation to the total cost of the asset is depreciated separately.

The depreciation charge for each year is recognised in profit or loss unless it is included in the carrying amount of another asset.

Group as lessor

Leases for which the Group is a lessor are classified as finance or operating leases. Whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee, the contract is classified as a finance lease. All other leases are classified as operating leases. Lease classification is made at inception and is only reassessed if there is a lease modification.

1.9 Leases (continued)

When the Group is an intermediate lessor, it accounts for the head lease and the sublease as two separate contracts. The sublease is classified as a finance or operating lease by reference to the right-of-use asset arising from the head lease. If the head lease is a short-term lease to which the Group applies the exemption described previously, then it classifies the sub-lease as an operating lease.

1.10 Inventories

Inventories are measured at the lower of cost and net realisable value on the weighted average method.

Net realisable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale.

The cost of inventories comprises all costs of purchase, costs of conversion and other costs incurred in bringing the inventories to their present location and condition.

1.11 Other receivables from contracts with customers

This accounting policy needs to be read in conjunction with the accounting policies for revenue from contracts with customers, contract assets and advances on contracts with customers. The Group presents as an asset the gross amount due from customers for contract work for all contracts in progress for which costs incurred plus recognised profits (less recognised losses) exceed progress billings. These are included in other receivables from contracts with customers under current assets. Progress billings that are invoiced but not yet paid by customers are included in trade and other receivables.

Other receivables from contracts with customers denominated in foreign currency

When other receivables from contracts with customers are denominated in a foreign currency, the carrying amount of the receivable is determined in the foreign currency. The carrying amount is then translated to the Rand equivalent using the spot rate at the end of each reporting period. Any resulting foreign exchange gains or losses are recognised in profit or loss.

1.12 Impairment of non-financial assets

The Group assesses at each end of the reporting period whether there is any indication that an asset may be impaired. If any such indication exists, the Group estimates the recoverable amount of the asset.

If there is any indication that an asset may be impaired, the recoverable amount is estimated for the individual asset. If it is not possible to estimate the recoverable amount of the individual asset, the recoverable amount of the cash-generating unit to which the asset belongs is determined.

The recoverable amount of an asset or a cash-generating unit is the higher of its fair value less costs to sell and its value in use.

If the recoverable amount of an asset is less than its carrying amount, the carrying amount of the asset is reduced to its recoverable amount. That reduction is an impairment loss.

An impairment loss of assets carried at cost less any accumulated depreciation is recognised immediately in profit or loss.

An entity assesses at each reporting date whether there is any indication that an impairment loss recognised in prior periods for assets may no longer exist or may have decreased. If any such indication exists, the recoverable amounts of those assets are estimated.

The increased carrying amount of an asset attributable to a reversal of an impairment loss shall not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset in prior periods.

A reversal of an impairment loss of assets carried at cost less accumulated depreciation is recognised immediately in profit or loss. Any reversal of an impairment loss of a revalued asset is treated as a revaluation increase.

1.13 Employee benefits

Short-term employee benefits

The cost of short-term employee benefits, (those payable within 12 months after the service is rendered, such as paid vacation leave and sick leave, bonuses, and non-monetary benefits such as medical care), are recognised in the period in which the service is rendered and are not discounted.

The expected cost of compensated absences is recognised as an expense as the employees render services that increase their entitlement or, in the case of non-accumulating absences, when the absence occurs.

Defined contribution plans

Payments to defined contribution retirement benefit plans are charged as an expense as they fall due.

Pension fund

The Group operates a defined contribution plan, the assets of which are held in a separate trustee-administered fund. The benefits payable by the fund in the future, due to retirements and withdrawals from the fund, are contributions to the fund together with fund interest at a rate determined by the valuator with the consent of the trustees. The rate is so determined that the value of the total of the fund shall not exceed the value of the total assets of the fund.

Defined benefit plans

Post-retirement medical benefits

The Group provides post-retirement medical benefits to qualifying employees, which is deemed to be a defined benefit plan. Contributions were made to the relevant funds over the expected service lives of the employees entitled to those funds. The estimated cost of providing such benefits was charged to profit or loss on a systematic basis over the employees' working lives within the Group.

For defined benefit plans the cost of providing the benefits is determined using the projected unit credit method. Actuarial valuations are conducted on an annual basis by independent actuaries separately for each plan.

Consideration is given to any event that could impact the funds up to the end of the reporting period where the interim valuation is performed at an earlier date.

Past service costs are recognised immediately to the extent that the benefits are already vested, and are otherwise amortised on a straight-line basis over the average period until the amended benefits become vested.

To the extent that, at the beginning of the financial year, any cumulative unrecognised actuarial gain or loss exceeds ten percent of the greater of the present value of the projected benefit obligation and the fair value of the plan assets (the corridor), that portion is recognised in profit or loss over the expected average remaining service lives of participating employees. Actuarial gains or losses within the corridor are not recognised.

Actuarial gains and losses are recognised in the year in which they arise, in other comprehensive income.

Gains or losses on the curtailment or settlement of a defined benefit plan is recognised when the Group is demonstrably committed to curtailment or settlement.

When it is virtually certain that another party will reimburse some or all of the expenditure required to settle a defined benefit obligation, the right to reimbursement is recognised as a separate asset. The asset is measured at fair value. In all other respects, the asset is treated in the same way as plan assets. In profit or loss, the expense relating to a defined benefit plan is presented as the net of the amount recognised for a reimbursement.

The amount recognised in the Statements of Financial Position represents the present value of the defined benefit obligation as adjusted for unrecognised actuarial gains and losses and unrecognised past service costs, and reduces by the fair value of plan assets.

1.13 Employee benefits (continued)

Any asset is limited to unrecognised actuarial losses and past service costs, plus the present value of available refunds and reduction in future contributions to the plan.

1.14 Provisions and contingencies

Provisions are recognised when:

- The Group has a present legal or constructive obligation as a result of a past event;
- It is probable that an outflow of resources embodying economic benefits will be required to settle the obligation; and
- A reliable estimate can be made of the obligation.

The amount of a provision is the present value of the expenditure expected to be required to settle the obligation.

Contingent assets and contingent liabilities are not recognised. Contingencies are disclosed in note 27.

1.15 Government grants

Government grants are recognised when there is reasonable assurance that:

- The Group will comply with the conditions attached to them; and
- The grants will be received.

Government grants are recognised as income over the periods necessary to match them with the related costs that they are intended to compensate.

A government grant that becomes receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to the entity with no future related costs is recognised as income for the period in which it becomes receivable.

Government grants related to assets, including non-monetary grants at fair value, are presented in the Statements of Financial Position by deducting the grant to arrive at the carrying amount of the asset.

Where government grants have been committed by the grantor and relate to past events, but the corresponding funds are receivable over time, the amounts are recognised as assets and classified between current and non-current portions based on their expected settlement dates.

1.16 Revenue from contracts with customers

The Group derives revenue from contracts with customers for the following:

- Contract income, including CSIR International Convention Centre revenue
- Operating leases
- Royalty income

The Group measures and accounts for revenue based on the specifications of each individual contract with a customer, excluding any amounts received on behalf of third parties, and based on the contractual obligations either accounts for the revenue at a specific point in time or over time as control of the goods or services are transferred to the customer.

The Group recognises revenue over time if a customer simultaneously receives and consumes all of the benefits provided by the Group. The Group recognises revenue at a point in time if the over time criteria is not met. Revenue is recognised when control is transferred to the customer which is usually when legal title passes to the customer and the business has the right to payment. Refer below for further explanation of the different products and services and when control is transferred to the customer and when the Group has right to payment.

1.16 Revenue from contracts with customers (continued)

Contract income (including CSIR International Convention Centre revenue)

Contract income comprises the consideration received or receivable on contracts entered into with customers in the ordinary course of the Group's activities. Revenue is shown net of amounts collected on behalf of third parties (e.g. VAT). Revenue is recognised at the amount of the transaction price that is allocated to each performance obligation, determined at an amount that depicts the consideration to which the Group expects to be entitled in exchange for transferring the goods and services promised to the customer. Where a contract contains multiple performance obligations, the transaction price is allocated to each performance obligation based on their relative stand-alone selling prices.

Contract income is recognised when the transfer of control of the identified performance obligation(s) has been satisfied. In term contracts, where milestones and invoicing dates are not aligned, revenue is recognised according to the stage of completion. Stage of completion is measured based on costs incurred as a percentage of total estimated costs required to satisfy the performance obligation.

Operating leases

Contract income from operating leases is recognised on a straight-line basis over the lease term.

Royalty income

Royalty income arises from agreements permitting customers to use the Group's intellectual property under license. It is recognised when it falls due to the Group, when the licensee completes a sale of products or services incorporating the licensed intellectual property.

1.17 Contract assets and advances on contracts with customers

The accounting policy for contract assets needs to be read in conjunction with the accounting policy for revenue from contracts with customers. Contract assets arise on the basis that costs are incurred to satisfy performance obligations. The related payment timing is determined based on each individual contract. These costs include costs to fulfil a contract and includes costs such as direct labour, materials, professional/consulting services and allocation of overhead costs which relate directly to satisfying performance obligations of the contract.

Contract assets are recovered from the customer when the relevant performance obligations are completed and payment can be obtained from the customer. If costs are incurred on a contract without a corresponding payment being receiveable it is shown as contract assets at the reporting period.

If the customer has paid in advance for performance obligations to be satisfied it is shown as advances from customers within current liabilities. The Group presents as a liability the gross amount due to customers for contract work for all contracts in progress for which progress billings exceed costs incurred plus recognised profits (less recognised losses).

Contract assets and advances on contracts with customers denominated in foreign currency

When contract assets and advances on contracts with customers are denominated in a foreign currency, the carrying amount of the asset is determined in the foreign currency. The carrying amount is then translated to the Rand equivalent using the spot rate at the end of each reporting period. Any resulting foreign exchange gains or losses are recognised in profit or loss.

1.18 Related parties

A related party is a person or an entity with the ability to control or jointly control the other party, or exercise significant influence over the other party, or vice versa, or an entity that is subject to common control, or joint control.

Control is the power to govern the financial and operating policies of an entity so as to obtain benefits from its activities.

A related party transaction is a transfer of resources, services or obligations between the reporting entity and a related party, regardless of whether a price is charged.

1.18 Related parties (continued)

Significant influence is the power to participate in the financial and operating policy decisions of an entity but is not control over those policies.

Key management are those persons responsible for planning, directing and controlling the activities of the entity, including those charged with the governance of the entity in accordance with legislation, in instances where they are required to perform such functions. All individuals from the level of Executive Management up to the Board of Directors are regarded as key management.

Close family members of a person are those family members who may be expected to influence or be influenced by that person in their dealings with the entity.

The Group is exempt from disclosure requirements in relation to related party transactions if that transaction occurs within normal supplier and/or client/recipient relationships on terms and conditions no more or less favourable than those which it is reasonable to expect the entity to have adopted if dealing with that individual entity or person in the same circumstances and terms and conditions are within the normal operating parameters established by that reporting entity's legal mandate.

The Group has elected to disclose all related party transactions and balances.

The Group operates in an economic sector currently dominated by entities directly or indirectly owned by the South African Government. As a consequence of the constitutional independence of the three spheres of government in South Africa, all national and provincial government departments, as well as their related entities, are considered to be related parties.

1.19 Finance income and finance expense

The Group's finance income and finance expense amounts include:

- Interest income on bank balances, investments in debt instruments, trade and other receivables and government grant receivables.
- Interest expense on lease liabilities, trade and other payables and long-term payables.

Interest income and expense is recognised in profit or loss as it accrues, using the effective interest rate method.

2. Revenue

	GROUP		CSIR	
	2025	2024	2025	2024
	R'000	R'000	R'000	R'000
Revenue				
Parliamentary Grant	697,120	729,724	697,120	729,724
Contract income	2,195,599	2,019,523	2,195,599	2,019,523
Royalty income	2,463	1,986	2,463	1,986
Other government grants	644,890	399,445	644,890	399,445
	3,540,072	**3,150,678**	**3,540,072**	**3,150,678**
The Group disaggregates revenue as follows:				
Parliamentary Grant				
Parliamentary Grant received	679,721	714,308	679,721	714,308
Less:				
Grant received for projects started before year-end but not completed	(23,829)	(41,228)	(23,829)	(41,228)
Add:				
Grant received in prior year for projects completed in this year	41,228	56,644	41,228	56,644
	697,120	**729,724**	**697,120**	**729,724**
Contract income				
Local private sector	244,574	225,006	244,574	225,006
Local public sector	1,594,808	1,481,831	1,594,808	1,481,831
International sector (including Africa)	356,217	312,686	356,217	312,686
	2,195,599	**2,019,523**	**2,195,599**	**2,019,523**
Royalty income				
Royalty income	2,463	1,986	2,463	1,986
Other government grants				
Other government grants	644,890	399,445	644,890	399,445
Total revenue	**3,540,072**	**3,150,678**	**3,540,072**	**3,150,678**

2. Revenue (continued)

	GROUP		CSIR	
	2025	2024	2025	2024
	%	%	%	%
Parliamentary Grant				
Parliamentary Grant	19.69 %	23.16 %	19.69 %	23.16 %
Contract income				
Local private sector	6.91 %	7.14 %	6.91 %	7.14 %
Local public sector	45.05 %	47.03 %	45.05 %	47.03 %
International sector (including Africa)	10.06 %	9.93 %	10.06 %	9.93 %
Other government grants				
Other government grants	18.22 %	12.68 %	18.22 %	12.68 %
Royalty income				
Royalty income	0.07 %	0.06 %	0.07 %	0.06 %
	100.00 %	**100.00 %**	**100.00 %**	**100.00 %**

Estimates on Parliamentary Grant recognition are based on cost to completion, budgets and percentage of completion.

Included in contract income is rental income amounting to R80,2 million (2024: R64,3 million) and revenue of R50,6 million (2024: R39,5 million) earned by the CSIR International Convention Centre.

Other government grants relate to income from contracts with government that impose specified performance conditions on the CSIR.

Included in other government grants is R140,9 million (2024: R144,0 million) ring-fenced allocation from the Department of Science, Technology and Innovation for specific initiatives managed through memorandums of agreement.

The amount of R633,1 million included in advances from customers as at the beginning of the financial year, has been recognised in revenue in 2025 (2024: R685,7 million).

3. Other income

	GROUP		CSIR	
	2025	2024	2025	2024
	R'000	R'000	R'000	R'000
Bad debts recovered	332	1,680	332	1,680
Compensation from insurance claims	865	-	865	-
Other recoveries	2,227	4,062	2,227	4,062
Profit on disposal of property, plant and equipment	-	642	-	642
Foreign exchange gains	-	3,389	-	3,389
Realised gain on investment at fair value through profit or loss	-	17,642	-	17,642
Realised gain on investment at fair value through other comprehensive income	-	646	-	646
	3,424	**28,061**	**3,424**	**28,061**

	GROUP		CSIR	
	2025	2024	2025	2024
	R'000	R'000	R'000	R'000
4. Operating loss				
Operating loss for the year is arrived at after taking the following items, amongst others, into account:				
Depreciation				
Depreciation of property, plant and equipment	47,656	43,561	47,656	43,561
Depreciation of right-of-use assets	2,840	2,140	2,840	2,140
Total depreciation	**50,496**	**45,701**	**50,496**	**45,701**
Movement in credit loss allowances				
Trade and other receivables	254	6,619	254	6,619
Other				
Bad debts written off	515	2,069	515	2,057
Foreign exchange losses/(gains)	4,358	(3,389)	4,358	(3,389)
Impairment/(reversal of impairment) on investments in joint venture and associate	1,191	(1,668)	-	-
Loss/(profit) on disposal and write-off of property, plant and equipment	91	(642)	91	(642)
5. Finance income				
Interest on bank balances	29,719	27,256	29,126	26,695
Other investment income	54,090	44,419	54,090	44,419
Interest on grant receivable	19,069	-	19,069	-
Total	**102,878**	**71,675**	**102,285**	**71,114**
6. Finance expense				
Interest on lease liabilities	819	887	819	887
Interest on long-term payables	19,069	-	19,069	-
Total	**19,888**	**887**	**19,888**	**887**
7. Taxation				
Opening balance	5,223	5,745	-	-
Assessed tax loss utilised for the year	(396)	(522)	-	-
Assessed tax loss carried forward	**4,827**	**5,223**	**-**	**-**

A subsidiary in the Group (CSIR C^3 SOC Ltd) is in an assessed loss position and no deferred tax was raised for the assessed loss due to the uncertainty of the recoverability in future periods in respect of the carry forward of unused tax losses.

The CSIR is exempt from South African income tax in terms of section 10(1)(t)(i) of the Income Tax Act, Act 58 of 1962.

8. Property, plant and equipment

	2025			2024		
	Cost or revaluation	Accumulated depreciation	Carrying value	Cost or revaluation	Accumulated depreciation	Carrying value
GROUP	R'000	R'000	R'000	R'000	R'000	R'000
Land	187,333	-	187,333	138,400	-	138,400
Buildings	611,903	(116,797)	495,106	592,416	(110,382)	482,034
Furniture and fixtures	16,315	(13,415)	2,900	16,690	(13,571)	3,119
Vehicles	7,784	(5,970)	1,814	7,074	(6,071)	1,003
Equipment	561,477	(436,260)	125,217	554,034	(433,305)	120,729
IT equipment	261,275	(187,147)	74,128	242,594	(179,651)	62,943
Total	**1,646,087**	**(759,589)**	**886,498**	**1,551,208**	**(742,980)**	**808,228**

	2025			2024		
	Cost or revaluation	Accumulated depreciation	Carrying value	Cost or revaluation	Accumulated depreciation	Carrying value
CSIR	R'000	R'000	R'000	R'000	R'000	R'000
Land	187,333	-	187,333	138,400	-	138,400
Buildings	611,903	(116,797)	495,106	592,416	(110,382)	482,034
Furniture and fixtures	16,315	(13,415)	2,900	16,690	(13,571)	3,119
Vehicles	7,784	(5,970)	1,814	7,074	(6,071)	1,003
Equipment	561,477	(436,260)	125,217	554,034	(433,305)	120,729
IT equipment	261,275	(187,147)	74,128	242,594	(179,651)	62,943
Total	**1,646,087**	**(759,589)**	**886,498**	**1,551,208**	**(742,980)**	**808,228**

Reconciliation of property, plant and equipment - Group - 2025

	Opening balance	Additions	Disposals and write-offs	Revaluations	Depreciation	Closing balance
	R'000	R'000	R'000	R'000	R'000	R'000
Land	138,400	-	-	48,933	-	187,333
Buildings	482,034	19,487	-	-	(6,415)	495,106
Furniture and fixtures	3,119	356	(5)	-	(570)	2,900
Vehicles	1,003	1,006	(4)	-	(191)	1,814
Equipment	120,729	24,330	(257)	-	(19,585)	125,217
IT equipment	62,943	32,483	(403)	-	(20,895)	74,128
	808,228	**77,662**	**(669)**	**48,933**	**(47,656)**	**886,498**

Reconciliation of property, plant and equipment - Group - 2024

	Opening balance	Additions	Disposals and write-offs	Depreciation	Closing balance
	R'000	R'000	R'000	R'000	R'000
Land	138,400	-	-	-	138,400
Buildings	480,696	8,696	(58)	(7,300)	482,034
Furniture and fixtures	1,775	1,912	(8)	(560)	3,119
Vehicles	1,174	-	(3)	(168)	1,003
Equipment	115,161	23,749	(647)	(17,534)	120,729
IT equipment	49,417	32,082	(557)	(17,999)	62,943
	786,623	**66,439**	**(1,273)**	**(43,561)**	**808,228**

8. Property, plant and equipment (continued)

Reconciliation of property, plant and equipment - CSIR - 2025

	Opening balance	Additions	Disposals and write-offs	Revaluations	Depreciation	Closing balance
	R'000	R'000	R'000	R'000	R'000	R'000
Land	138,400	-	-	48,933	-	187,333
Buildings	482,034	19,487	-	-	(6,415)	495,106
Furniture and fixtures	3,119	356	(5)	-	(570)	2,900
Vehicles	1,003	1,006	(4)	-	(191)	1,814
Equipment	120,729	24,330	(257)	-	(19,585)	125,217
IT equipment	62,943	32,483	(403)	-	(20,895)	74,128
	808,228	**77,662**	**(669)**	**48,933**	**(47,656)**	**886,498**

Reconciliation of property, plant and equipment - CSIR - 2024

	Opening balance	Additions	Disposals and write-offs	Depreciation	Closing balance
	R'000	R'000	R'000	R'000	R'000
Land	138,400	-	-	-	138,400
Buildings	480,696	8,696	(58)	(7,300)	482,034
Furniture and fixtures	1,775	1,912	(8)	(560)	3,119
Vehicles	1,174	-	(3)	(168)	1,003
Equipment	115,161	23,749	(647)	(17,534)	120,729
IT equipment	49,417	32,082	(557)	(17,999)	62,943
	786,623	**66,439**	**(1,273)**	**(43,561)**	**808,228**

Revaluations

The Group's land is stated at revalued amounts, being the fair value at the date of revaluation, less any subsequent accumulated impairment losses. Revaluations are performed every five years and in intervening years if the carrying amount of the land differs materially from their fair value.

The valuations were performed in the current financial year by Mr Paul Ntjie Mowasa, an independent valuer not related to the Group. Mr Mowasa is a member of the South African Council for the Property Valuers Profession and has the appropriate qualifications and recent experience in the fair value measurement of properties in the relevant locations.

The valuations were performed using the comparable sales approach, which reflects transaction prices for similar properties in the same location and condition. These resulted in a revaluation surplus of R48,9 million for the current financial year.

The carrying value of the revalued assets under the cost model would have been:

	GROUP		CSIR	
	2025	2024	2025	2024
	R'000	R'000	R'000	R'000
Land	4,829	4,829	4,829	4,829

8. Property, plant and equipment (continued)

Details of properties

Land and buildings are unencumbered and full details of the titles are available at the registered office of the CSIR.

A change in the depreciation estimate due to a change in the useful lives of equipment, IT equipment, furniture and fixtures and vehicles resulted in a R3,4 million (2024: R2,4 million) decrease in the depreciation amount for the current financial year.

During the current financial year, assets to the value of R427,0 million (2024: R197,0 million) were purchased with government grant funds. Included in this amount is R271,6 million pertaining to the acquisition of a High-Performance Computing (HPC) System. Grant receivable and long-term payable amounts have been recognised relating to the acquisition of, and funding for, this system. Refer to notes 12 and 21. At year-end, the cumulative value of assets purchased with government grant funds and shown at a nil cost is R1,5 billion (2024: R1,1 billion).

9. Leases (Group as lessee)

The Group leases several assets, including buildings, motor vehicles and office equipment. The average lease term is four years.

Details pertaining to leasing arrangements, where the Group is lessee are presented below:

Net carrying amounts of right-of-use assets

The carrying amounts of right-of-use assets are included in the following line items:

	GROUP		CSIR	
	2025	2024	2025	2024
	R'000	R'000	R'000	R'000
Buildings	1,818	3,562	1,818	3,562
Motor vehicles	3,436	4,416	3,436	4,416
	5,254	**7,978**	**5,254**	**7,978**
Additions to right-of-use assets				
Motor vehicles	640	2,996	640	2,996
Depreciation recognised on right-of-use assets				
Depreciation recognised on each class of right-of-use assets, is presented below:				
Buildings	1,220	758	1,220	758
Motor vehicles	1,620	1,382	1,620	1,382
	2,840	**2,140**	**2,840**	**2,140**
Other disclosures				
Interest expense on lease liabilities	819	887	819	887

9. Leases (Group as lessee) (continued)

	GROUP		CSIR	
	2025	2024	2025	2024
	R'000	R'000	R'000	R'000
Lease liabilities				
The maturity analysis of lease liabilities is as follows:				
Within one year	2,950	2,817	2,950	2,817
Two to five years	4,207	4,784	4,207	4,784
More than five years	-	663	-	663
	7,157	**8,264**	**7,157**	**8,264**
Non-current liabilities	4,207	5,447	4,207	5,447
Current liabilities	2,950	2,817	2,950	2,817
	7,157	**8,264**	**7,157**	**8,264**

10. Interest in subsidiaries

Shares at cost less impairment losses	-	-	4,650	4,650
Indebtedness				
- by subsidiaries	-	-	-	-
- impairment of loans	-	-	-	-
	-	**-**	**4,650**	**4,650**

The following table provides details of the entity which is controlled directly by the CSIR, and the carrying amount of the investment in the CSIR's separate financial statements.

	CSIR					
	% voting power	% voting power	% holding	% holding	Carrying amount	Carrying amount
	2025	2024	2025	2024	2025	2024
Name of company					R'000	R'000
CSIR C^3 SOC Ltd	100 %	100 %	100 %	100 %	4,650	4,650

11. Interests in joint venture and associate

	GROUP			
	% ownership interest	% ownership interest	Carrying amount	Carrying amount
	2025	2024	2025	2024
			R'000	R'000
Name of company				
Joint venture				
Sera (Pty) Ltd - South Africa	50.00 %	50.00 %	-	-
Associate				
Persomics AB - Sweden	35.03 %	35.03 %	20,977	19,786
			20,977	19,786
Impairment			(20,977)	(19,786)
			-	-

11. Interests in joint venture and associate (continued)

	CSIR			
	% ownership interest	% ownership interest	Carrying amount	Carrying amount
	2025	2024	2025	2024
Name of company			R'000	R'000
Joint venture				
Sera (Pty) Ltd - South Africa	50.00 %	50.00 %	-	-
Associate				
Persomics AB - Sweden	35.03 %	35.03 %	26,325	26,325
			26,325	26,325
Impairment			(26,325)	(26,325)
			-	-

Sera (Pty) Ltd is in the process of deregistration.

The investment in Persomics AB has been fully impaired at CSIR and Group level as at 31 March 2025. Persomics AB reached the final decision to enter into voluntary liquidation in Sweden. It is expected that this process will be completed during the 2025/26 financial year.

The following are details of the significant joint venture's and associate's assets, liabilities, income and expenses:

	GROUP		GROUP	
	JOINT VENTURE		ASSOCIATE	
	2025	2024	2025	2024
	R'000	R'000	R'000	R'000
Current assets	-	-	-	707
Non-current assets	-	-	4,149	-
(Income)/expenses	-	-	(3,401)	4,763

12. Government grant receivable

	GROUP		CSIR	
	2025	2024	2025	2024
	R'000	R'000	R'000	R'000
Government grant receivable	221,288	-	221,288	-
Non-current asset	158,279	-	158,279	-
Current asset	63,009	-	63,009	-
	221,288	**-**	**221,288**	**-**

The government grant receivable pertains to the acquisition of a High-Performance Computing (HPC) System (refer to note 8) during the current financial year on deferred payment terms (refer to note 21). This system is funded through a ring-fenced allocation in the Estimates of National Expenditure (ENE) under the National Integrated Cyberinfrastructure System (NICIS) line item. The Department of Science, Technology and Innovation confirmed their commitment to fund this system for the duration of the five year agreement.

The grant receivable fully matches the ageing, the inverse value and amortisation of the long-term payable. Refer to note 21 for further detail.

	GROUP		CSIR	
	2025	2024	2025	2024
	R'000	R'000	R'000	R'000
12. Government grant receivable (continued)				
Reconciliation of the government grant receivable:				
Initial recognition at present value	271,620	-	271,620	-
Finance income recognised (note 5)	19,069	-	19,069	-
Government grant payment received	(69,401)	-	(69,401)	-
Closing balance	**221,288**	**-**	**221,288**	**-**

The present value of the grant payment receivable within 12 months from the reporting date, including the interest portion, is reflected as a current asset.

13. Inventories

Finished goods	676	737	676	737

The cost of inventories recognised as an expense for the year amounted to R21,4 million (2024: R20,9 million).

14. Other receivables from contracts with customers

Contracts in progress at the end of the reporting period				
Other receivables from contracts with customers	200,112	193,329	200,112	193,329

Other receivables from contracts with customers arise as result of the time lag between customer billing and revenue recognition. Contract assets (refer to note 16) constitute capitalised costs on point in time contracts with customers. Advances received in excess of work completed are included in advances from customers under current liabilities (refer to note 23).

15. Trade and other receivables

Financial instruments:				
Trade receivables	373,897	327,533	373,895	327,531
Trade receivables loss allowance	(33,931)	(33,699)	(33,931)	(33,699)
Trade receivables at amortised cost	339,966	293,834	339,964	293,832
Deposits	2,679	1,190	2,679	1,190
Other receivables	9,030	9,566	9,030	9,543
Other receivables loss allowance	(5,055)	(5,033)	(5,055)	(5,033)
Non-financial instruments:				
Prepayments	81,869	102,929	81,869	102,929
Total trade and other receivables	**428,489**	**402,486**	**428,487**	**402,461**

16. Contract assets

	GROUP		CSIR	
	2025	2024	2025	2024
	R'000	R'000	R'000	R'000
Contract assets	2,992	4,856	2,992	4,856
Contract assets constitute capitalised costs on point in time contracts with customers.				
Reconciliation of contract assets				
Opening balance	4,856	2,871	4,856	2,871
Increase in contract assets	2,517	3,778	2,517	3,778
Transfers of contract assets to receivables	(4,381)	(1,793)	(4,381)	(1,793)
	2,992	**4,856**	**2,992**	**4,856**

17. Investments at fair value through profit or loss

In the prior financial year, the CSIR held a structured financial instrument issued by First Rand Bank Limited in the form of listed registered notes. This investment was classified as an investment at fair value through profit or loss. The investment matured on 22 December 2023 and therefore no longer reflects on the Statements of Financial Position.

18. Investments at fair value through other comprehensive income

Investments in debt instruments	656,649	587,752	656,649	587,752
Split between non-current and current portions				
Current assets	656,649	587,752	656,649	587,752

The amount represents the Group's interest in Stanlib's Flexible Income Fund, which is designed to take advantage of exposure to income-generating investments through various interest-rate environments. The fund invests mainly in South African investment markets (but may allocate capital to foreign markets) and is benchmarked against the Alexander Forbes Short-Term Fixed Interest (STeFI) Composite Index.

Interest distributions from the fund are made quarterly.

19. Cash and cash equivalents

Cash and cash equivalents consist of:				
Cash on hand	85	92	85	92
Bank balances	64,073	136,139	63,477	135,384
Short-term deposits	481,508	601,060	472,537	592,667
	545,666	**737,291**	**536,099**	**728,143**

Cash on hand comprises petty cash.

20. Post-retirement benefits

CSIR Pension Fund

The fund is registered in terms of the Pension Funds Act, 1956 (Act 24 of 1956), and is a defined contribution plan. The CSIR's liability to the fund was limited to paying the employer contributions up until 29 February 2016. The impact of the tax reform effective from 1 March 2016 is that the CSIR package structure was changed to reflect all retirement fund contributions as employee contributions. All permanent CSIR employees are members of the fund.

Employee contributions of R224,1 million (2024: R208,7 million) were expensed during the year.

Post-retirement medical benefits

The CSIR has a post-retirement medical benefit obligation to certain qualifying retired CSIR employees (pensioners) who joined the CSIR prior to 30 September 1996. An offer was made to qualifying pensioners in December 2005 to accept an annuity, payable from an independent source, equivalent to the value of their medical subsidy. The pensioners who accepted the offer are no longer entitled to a subsidy from the CSIR.

The accumulated benefit obligation and the annual cost of accrual of benefits are assessed by independent, qualified actuaries using the projected unit credit method. The estimated present value of the anticipated expenditure for the remaining 18 continuation members (2024: 18 continuation members) was recalculated by the actuaries as at 31 March 2025 and will be funded through cash and cash equivalents. These cash and cash equivalents have not been set aside specifically for this benefit.

The amount included in the Statement of Financial Position arising from the CSIR's obligation in respect of post-retirement medical benefits is as follows:

	GROUP		CSIR	
	2025	2024	2025	2024
	R'000	R'000	R'000	R'000
Carrying value				
Present value of the defined benefit obligation - wholly unfunded	12,775	11,825	12,775	11,825
Non-current liabilities	10,547	9,770	10,547	9,770
Current liabilities	2,228	2,055	2,228	2,055
	12,775	**11,825**	**12,775**	**11,825**

Amounts recognised in the Statement of Profit or Loss and Other Comprehensive Income in respect of the scheme are as follows:

Net amount recognised				
Interest cost	1,131	1,029	1,131	1,029
Actuarial gain	(181)	(1,182)	(181)	(1,182)
	950	**(153)**	**950**	**(153)**
Movement in the net liability recognised in the Statement of Financial Position is as follows:				
Net liability at the beginning of the year	11,825	11,978	11,825	11,978
Net expense/(income) recognised in the Statement of Profit or Loss and Other Comprehensive Income	950	(153)	950	(153)
Net liability at the end of the year	**12,775**	**11,825**	**12,775**	**11,825**

20. Post-retirement benefits (continued)

	GROUP		CSIR	
	2025	2024	2025	2024
	%	%	%	%
Principal actuarial assumptions at the reporting date:				
Discount rate	9.42 %	10.45 %	9.42 %	10.45 %
CPI inflation rate	4.76 %	5.23 %	4.76 %	5.23 %

The above results are sensitive to changes in the discount rate and the CPI inflation rate.

	GROUP		CSIR	
	2025	2024	2025	2024
	R'000	R'000	R'000	R'000
The effect of a one percent increase in the assumed discount rate would have the following effects:				
Effect on defined benefit obligation	(548)	(514)	(548)	(514)
The effect of a one percent decrease in the assumed discount rate would have the following effects:				
Effect on defined benefit obligation	599	562	599	562
The effect of a one percent increase in the assumed CPI inflation rate would have the following effects:				
Effect on defined benefit obligation	599	557	599	557
The effect of a one percent decrease in the assumed CPI inflation rate would have the following effects:				
Effect on defined benefit obligation	(548)	(516)	(548)	(516)

The above sensitivity analyses are based on a change in an assumption while all other assumptions are assumed to remain unchanged. This may not always be realistic as some of the assumptions tend to be correlated. When calculating the sensitivity of the defined benefit obligation to significant actuarial assumptions, the same method (present value of the defined benefit obligation calculated with the projected unit credit method at the end of the reporting period) has been applied as when calculating the liability recognised within the Statement of Financial Position.

	2025	2024	2023	2022	2021
	R'000	R'000	R'000	R'000	R'000
Historical information					
Present value of the defined benefit obligation	12,775	11,825	11,978	12,204	12,881

The average term (undiscounted) of the defined benefit obligation is 7.3 years (2024: 7.75 years) and the average duration (discounted) of the defined benefit obligation is 4.9 years (2024: 5 years).

21. Long-term payables

	GROUP		CSIR	
	2025	2024	2025	2024
	R'000	R'000	R'000	R'000
Long-term payable	221,288	-	221,288	-
Non-current liability	158,279	-	158,279	-
Current liability	63,009	-	63,009	-
	221,288	**-**	**221,288**	**-**

The long-term payable pertains to the acquisition of a High-Performance Computing (HPC) System (refer to note 8) in the current financial year on deferred payment terms. The HPC System is funded through a ring-fenced allocation in the Estimates of National Expenditure (ENE) under the National Integrated Cyberinfrastructure (NICIS) line item over the duration of the agreement (refer to note 12).

The nominal value of the system is R321,4 million, to be settled in annual instalments over a five year period ending in the 2029 financial year. The terms of the contract do not include an expressly defined interest component, however the liability is measured at present value, resulting in an interest expense of 9.43% per annum. This rate represents the market rate for similar or indicative financing arrangements for this organisation.

The long-term payable is amortised as follows:

	Opening balance	Contractual instalment	Finance cost	Capital payment	Closing balance
	R'000	R'000	R'000	R'000	R'000
Financial year ending					
31 March 2025	271,620	69,401	19,069	50,332	221,288
31 March 2026	221,288	63,009	14,926	48,083	173,205
31 March 2027	173,205	63,009	10,392	52,617	120,588
31 March 2028	120,588	63,009	5,430	57,579	63,009
31 March 2029	63,009	63,009	-	63,009	-
		321,437	**49,817**	**271,620**	

The difference between the nominal value and the present value is recognised as finance expense over the term of the payment arrangement, using the effective interest method.

	GROUP		CSIR	
	2025	2024	2025	2024
	R'000	R'000	R'000	R'000
Reconciliation of the long-term payable:				
Initial recognition at present value	271,620	-	271,620	-
Finance expense recognised (note 6)	19,069	-	19,069	-
Repayments	(69,401)	-	(69,401)	-
Closing balance	**221,288**	**-**	**221,288**	**-**

The present value of the payment due within 12 months from the reporting date, including the interest portion, is reflected as a current liability.

22. Trade and other payables

	GROUP		CSIR	
	2025	2024	2025	2024
	R'000	R'000	R'000	R'000
Financial instruments:				
Trade payables	200,130	226,058	200,144	226,072
Salary related payables	100,078	89,482	100,078	89,482
Non-financial instruments:				
VAT	37,508	35,089	37,508	35,089
Total trade and other payables	**337,716**	**350,629**	**337,730**	**350,643**

23. Advances from customers

Advances from customers	828,827	974,410	828,827	974,410

Advances from customers constitute advances received in excess of work completed.
Refer to note 2 for disclosure of the portion of advances from customers recognised as revenue during the current and prior financial years.

24. Provisions

Reconciliation of provisions - Group - 2025	Opening balance	Additions	Utilised during the year	Reversed during the year	Closing balance
	R'000	R'000	R'000	R'000	R'000
Other provisions	74,496	114,003	(76,611)	-	111,888

Reconciliation of provisions - Group - 2024	Opening balance	Additions	Utilised during the year	Reversed during the year	Closing balance
	R'000	R'000	R'000	R'000	R'000
Other provisions	98,722	74,496	(97,252)	(1,470)	74,496

Reconciliation of provisions - CSIR - 2025	Opening balance	Additions	Utilised during the year	Reversed during the year	Closing balance
	R'000	R'000	R'000	R'000	R'000
Other provisions	74,496	114,003	(76,611)	-	111,888

Reconciliation of provisions - CSIR - 2024	Opening balance	Additions	Utilised during the year	Reversed during the year	Closing balance
	R'000	R'000	R'000	R'000	R'000
Other provisions	98,722	74,496	(97,252)	(1,470)	74,496

Other provisions comprise of provision for short-term employees' performance incentives. The provision was based on the approved Short-Term Incentive (STI) guideline and was estimated based on past established practice.

25. Reconciliation of profit for the year to cash utilised in operating activities

	GROUP		CSIR	
	2025	2024	2025	2024
	R'000	R'000	R'000	R'000
Profit for the year	41,019	36,974	40,623	36,468
Adjusted for:				
Depreciation	50,496	45,701	50,496	45,701
Loss/(profit) on disposal and write-off of property, plant and equipment	91	(642)	91	(642)
Net unrealised foreign exchange gains	(4,462)	(4,782)	(4,462)	(4,782)
Bad debts written off	515	2,069	515	2,057
Finance income	(102,878)	(71,675)	(102,285)	(71,114)
Finance expense	19,888	887	19,888	887
Impairments	1,445	4,951	254	6,619
Movement in post-retirement medical benefits	1,131	1,029	1,131	1,029
Movements in provisions	37,392	(24,226)	37,392	(24,226)
Leave accrual	17,687	14,593	17,687	14,593
Share of (profits)/losses from joint venture and associate	(1,191)	1,668	-	-
Profit on disposal and remeasurement of fair value investments	-	(17,642)	-	(17,642)
Profit on disposal of investment at fair value through other comprehensive income	-	(646)	-	(646)
Other non-cash items	524	16	524	-
Changes in working capital:				
Inventories	61	(98)	61	(98)
Trade and other receivables	(27,543)	37,247	(27,543)	37,231
Contract assets	1,864	(1,985)	1,864	(1,985)
Other receivables from contracts with customers	(2,931)	14,759	(2,931)	14,759
Trade and other payables	(30,603)	(21,296)	(30,603)	(21,292)
Advances from customers	(145,280)	(89,588)	(145,280)	(89,588)
Cash utilised in operating activities	**(142,775)**	**(72,686)**	**(142,578)**	**(72,671)**

26. Board members, Directors and Executive Management's remuneration

	2025		
	Emoluments	Directors' fees	Total
	R'000	R'000	R'000
Board members and Executive Directors			
Dr TH Dlamini	7,643	-	7,643
Non-executive Board members			
Prof. A Van Zyl	-	192	192
M Govender	-	142	142
Dr C Render	-	126	126
Prof. Y Ballim	-	138	138
M Matolong	-	126	126
Dr V Mthethwa	-	158	158
V Jarana	-	141	141
M Fakir	-	85	85
J Newton	-	138	138
M Mulcahy	-	139	139
Executive Management			
E Opperman	3,579	-	3,579
Dr K Naidoo	3,544	-	3,544
Dr RK Chikwamba	4,516	-	4,516
Dr MS Maserumule	5,035	-	5,035
MC Mabindisa	3,614	-	3,614
Adv. E Kennedy	3,897	-	3,897
Dr S Malinga	4,395	-	4,395
	36,223	**1,385**	**37,608**

26. Board members, Directors and Executive Management's remuneration (continued)

	2024		
	Emoluments	Directors' fees	Total
	R'000	R'000	R'000
Board members and Executive Directors			
Dr TH Dlamini	7,814	-	7,814
Non-executive Board members			
Prof. A Van Zyl	-	198	198
M Govender	-	132	132
Dr C Render	-	126	126
Prof. Y Ballim	-	145	145
M Matolong	-	121	121
Dr V Mthethwa	-	151	151
V Jarana	-	144	144
M Fakir	-	144	144
J Newton	-	147	147
M Mulcahy (from 12 July 2023)	-	92	92
Executive Management			
MA Dindar (until 30 June 2023)	2,825	-	2,825
E Opperman	2,739	-	2,739
Dr K Naidoo	3,502	-	3,502
Dr RK Chikwamba	4,579	-	4,579
Dr MS Maserumule	4,977	-	4,977
MC Mabindisa	3,477	-	3,477
Adv. E Kennedy	3,837	-	3,837
Dr S Malinga	4,211	-	4,211
	37,961	**1,400**	**39,361**

27. Contingencies

Due to the nature of the CSIR's business, agreements with complex deliverables may be entered into. All necessary steps are taken to manage the risks inherent to these transactions. If, and when, it is evident that there is a reasonable probability that a dispute on a transaction could lead to costs against the CSIR, such costs will be disclosed. Refer to note 34 for financial guarantees issued by the CSIR.

28. Financial instruments and risk management

Categories of financial instruments

Categories of financial assets

	Notes	Fair value through other comprehensive income - debt instruments	Amortised cost	Total
		R'000	R'000	R'000
Group - 2025				
Trade and other receivables	15	-	346,620	346,620
Investments at fair value through other comprehensive income	18	656,649	-	656,649
Cash and cash equivalents	19	-	545,666	545,666
		656,649	**892,286**	**1,548,935**
Group - 2024				
Trade and other receivables	15	-	299,557	299,557
Investments at fair value through other comprehensive income	18	587,752	-	587,752
Cash and cash equivalents	19	-	737,291	737,291
		587,752	**1,036,848**	**1,624,600**
CSIR - 2025				
Trade and other receivables	15	-	346,618	346,618
Investments at fair value through other comprehensive income	18	656,649	-	656,649
Cash and cash equivalents	19	-	536,099	536,099
		656,649	**882,717**	**1,539,366**
CSIR - 2024				
Trade and other receivables	15	-	299,532	299,532
Investments at fair value through other comprehensive income	18	587,752	-	587,752
Cash and cash equivalents	19	-	728,143	728,143
		587,752	**1,027,675**	**1,615,427**

28. Financial instruments and risk management (continued)

Categories of financial liabilities

	Notes	Amortised cost R'000	Total R'000
Group - 2025			
Long-term payables	21	221,288	221,288
Trade and other payables	22	300,208	300,208
		521,496	**521,496**
Group - 2024			
Trade and other payables	22	315,540	315,540
CSIR - 2025			
Long-term payables	21	221,288	221,288
Trade and other payables	22	300,222	300,222
		521,510	**521,510**
CSIR - 2024			
Trade and other payables	22	315,554	315,554

Financial risk management

Overview

The Group is exposed to the following risks from its use of financial instruments:

- Market risk (e.g. currency risk, interest rate risk and price risk);
- Credit risk; and
- Liquidity risk.

This note presents information about the Group's exposure to each of the above risks and the Group's objectives, policies and processes for measuring and managing risk. Further quantitative disclosures are included throughout these consolidated financial statements.

The Board has overall responsibility for the establishment and oversight of the Group's risk management framework.

The Group's risk management policies are established to identify and analyse the risks faced by the Group, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities. The Group, through its training and management standards and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and obligations.

The Audit and Risk Committee oversees how management monitors compliance with the Group's risk management policies and procedures and reviews the adequacy of the risk management framework in relation to the risks faced by the Group. The Group Audit and Risk Committee is assisted in its oversight role by Internal Audit. Internal Audit undertakes both regular and ad hoc reviews of risk management controls and procedures, the results of which are reported to the Audit and Risk Committee.

28.1 Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates and interest rates will affect the Group's income or the value of its holdings of financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising the return.

Foreign currency risk

The Group is exposed to currency risk on sales and purchases that are denominated in a currency other than the respective functional currency of the Group entities.

28. Financial instruments and risk management (continued)

The Group's exposure to foreign currency risk was as follows:

31 March 2025	ZAR R'000	EURO R'000	USD R'000	GBP R'000	Other R'000	Total R'000
Trade receivables - net of loss allowance	334,609	3,806	318	1,233	-	339,966
Bank balances	41,400	9,233	9,572	3,868	-	64,073
Trade and other payables	(299,229)	(526)	(158)	(295)	-	(300,208)
Gross statement of financial position exposure	76,780	12,513	9,732	4,806	-	103,831
Net exposure	**76,780**	**12,513**	**9,732**	**4,806**	**-**	**103,831**

31 March 2024	ZAR R'000	EURO R'000	USD R'000	GBP R'000	Other R'000	Total R'000
Trade receivables - net of loss allowance	269,687	4,099	17,529	1,370	1,149	293,834
Bank balances	63,170	6,378	60,923	5,668	-	136,139
Trade and other payables	(314,879)	(135)	(268)	(2)	(256)	(315,540)
Gross statement of financial position exposure	17,978	10,342	78,184	7,036	893	114,433
Net exposure	**17,978**	**10,342**	**78,184**	**7,036**	**893**	**114,433**

The following closing exchange rates were applied at reporting date:

	GROUP		CSIR	
	2025	2024	2025	2024
	R	R	R	R
Rand per unit of foreign currency:				
USD	18.481	19.003	18.481	19.003
Euro	20.018	20.608	20.018	20.608
GBP	23.931	24.031	23.931	24.031

Sensitivity analysis

A 10% strengthening of the rand against the following currencies at 31 March would have decreased profit or loss and equity by the amounts shown below. This analysis assumes that all other variables remain constant. The analysis is performed on the same basis for 2024.

	GROUP		CSIR	
	2025	2024	2025	2024
	R'000	R'000	R'000	R'000
Euro	(1,251)	(1,034)	(1,251)	(1,034)
USD	(973)	(7,818)	(973)	(7,818)
GBP	(481)	(704)	(481)	(704)
Other	-	(89)	-	(89)

A 10% weakening of the rand against the above currencies at 31 March would have had the equal but opposite effect on the above currencies to the amounts shown above, on the basis that all other variables remain constant.

28. Financial instruments and risk management (continued)

Interest rate risk

Interest rate exposure and investment strategies are evaluated by management on a regular basis. Interest-bearing investments are held with several reputable banks and financial institutions in order to minimise exposure.

At the reporting date the interest rate profile of the Group's interest-bearing financial instruments was as follows:

	GROUP		CSIR	
	2025	2024	2025	2024
	R'000	R'000	R'000	R'000
Fixed rate instruments: Carrying amount				
Financial assets: Fixed deposits	6,731	6,240	-	-
Variable rate instruments: Carrying amount				
Financial assets: Call deposits	474,777	594,820	472,537	592,667
Financial assets: Bank balances	64,073	136,139	63,477	135,384
Financial assets: Investments at fair value through other comprehensive income	656,649	587,752	656,649	587,752
	1,195,499	**1,318,711**	**1,192,663**	**1,315,803**

Sensitivity analysis

An increase of 100 basis points in interest rates at the reporting date would have increased profit or loss and equity by the amounts shown below. This analysis assumes that all other variables, in particular foreign currency rates, remain constant. The analysis is performed on the same basis for 2024.

Variable rate instruments	12,182	11,339	12,160	11,318

A decrease of 100 basis points would have had the equal but opposite effect to the amounts shown above.

The Group does not account for any fixed rate financial assets and liabilities at fair value through profit or loss, therefore a change in interest rates at the reporting date would not affect profit or loss.

28.2 Credit risk

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations. It arises principally from the Group's bank balances and deposits, trade and other receivables and loans to joint ventures, associates and subsidiaries.

Trade and other receivables and loans to joint ventures, associates and subsidiaries

Trade and other receivables and loans to joint ventures, associates and subsidiaries are presented net of impairment losses. Credit risk with respect to trade receivables is limited due to the large number of customers comprising the Group's customer base and their dispersion across different industries and geographical areas.

Bank balances and deposits

The Group's bank balances and cash are placed with high credit, quality financial institutions with no significant exposure to any one financial institution.

Guarantees

Refer to note 34 for details on bank guarantees issued with respect to facilities.

28. Financial instruments and risk management (continued)

Exposure to credit risk

The carrying amount of financial assets represents the maximum credit exposure.

	GROUP		CSIR	
	2025	2024	2025	2024
	R'000	R'000	R'000	R'000
The maximum exposure to credit risk at the reporting date was:				
Fixed deposits	6,731	6,240	-	-
Call deposits	474,777	594,820	472,537	592,667
Bank balances	64,073	136,139	63,477	135,384
Trade and other receivables	346,620	299,557	346,618	299,532
Other receivables from contracts with customers	200,112	193,329	200,112	193,329
	1,092,313	**1,230,085**	**1,082,744**	**1,220,912**
The maximum exposure to credit risk for trade receivables at the reporting date by type of customer was:				
Local public sector	251,954	191,190	251,952	191,188
Local private sector	84,339	80,897	84,339	80,897
International sector	3,673	21,747	3,673	21,747
	339,966	**293,834**	**339,964**	**293,832**

The Group's most significant customers are various local public sector customers.

	2025		2024	
	Gross	Impairment	Gross	Impairment
The aging of the Group's trade receivables at the reporting date was:	R'000	R'000	R'000	R'000
Not past due	313,673	6	239,204	1,444
Past due 0 – 30 days	17,404	152	32,408	1,934
Past due 31 – 60 days	639	144	6,038	-
Past due 61 – 90 days	4,667	3,298	4,599	384
Past due 91 – 120 days	3,385	420	13,775	3,209
Past due more than 120 days	34,129	29,911	31,509	26,728
	373,897	**33,931**	**327,533**	**33,699**

The movement in the allowance for impairment in respect of trade receivables during the year was as follows:

	GROUP	
	2025	2024
	R'000	R'000
Balance at 1 April	33,699	28,070
Movement for the year		
Recoveries	(12,187)	(9,035)
Reversals and write-off	(2,081)	(3,122)
New impairment allowances	14,500	17,786
Balance at 31 March	**33,931**	**33,699**

The allowance account in respect of trade receivables is used to record impairment losses unless the Group is satisfied that no recovery of the amount owing is possible; at that point the amount considered irrecoverable is written off against the financial asset directly.

28. Financial instruments and risk management (continued)

The fully performing trade receivables are considered to be of high credit quality.

28.3 Liquidity risk

Liquidity risk is the risk that the Group will not be able to meet its financial obligations as these fall due. The Group's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Group's reputation.

The Group monitors its cash flow on a daily basis. Typically, the Group ensures that it has sufficient cash on demand to meet expected operational expenses for a period of 60 days, including the servicing of financial obligations; this excludes the potential impact of extreme circumstances that cannot be predicted reasonably, such as natural disasters.

The following are the contractual maturities of financial liabilities, including interest payments but excluding the impact of netting agreements for the Group:

	2025				2024			
		Contractual cash flows				Contractual cash flows		
	Carrying amount	6 months or less	6 - 12 months	More than 12 months	Carrying amount	6 months or less	6 - 12 months	More than 12 months
	R'000	R'000	R'000	R'000	R'000	R'000	R'000	R'000
Non-derivative financial liabilities								
Trade and other payables	(300,208)	(300,208)	-	-	(315,540)	(315,540)	-	-
Long-term payable	(221,288)	(63,009)	-	(158,279)	-	-	-	-
Lease liabilities	(7,157)	(955)	(1,995)	(4,207)	(8,264)	(1,118)	(1,699)	(5,447)
	(528,653)	**(364,172)**	**(1,995)**	**(162,486)**	**(323,804)**	**(316,658)**	**(1,699)**	**(5,447)**

Fair values

The estimated net fair values, as at the reporting date, have been determined using available market information and appropriate valuation methodologies as outlined below. This value is not necessarily indicative of the amounts that the Group could realise in the normal course of business. The fair values of the financial assets and financial liabilities are sensitive to exchange rate movements. A sensitivity analysis of a 10% increase/decrease in exchange rate fluctuation on the balances held in foreign currency as at 31 March 2025 is performed.

As at 31 March 2025 the carrying amount of bank balances and cash, deposits, trade and other receivables, contracts in progress and trade and other payables approximated their fair values due to the short-term maturities of these assets and liabilities.

The Group assesses the carrying amount of the long-term payable to approximate its fair value, based on the market-aligned rates applied in measuring it at amortised cost.

Basis for determining fair values

Trade and other receivables, trade and other payables and long-term payable

The fair value of trade and other receivables and trade and other payables is calculated based on the present value of future cash flows, discounted at the average return on investment rate at the reporting date.

The fair value of the long-term payable is calculated based on a rate which represents the market rate for similar or indicative financing arrangements for this organisation.

29. Changes in liabilities arising from financing activities

	GROUP		CSIR	
	2025	2024	2025	2024
	R'000	R'000	R'000	R'000
Lease liabilities				
Opening balance	8,264	7,964	8,264	7,964
New leases	640	2,996	640	2,996
Other non-cash movements	819	(256)	819	(256)
Total non-cash movements	1,459	2,740	1,459	2,740
Cash flows	(2,566)	(2,440)	(2,566)	(2,440)
Closing balance	**7,157**	**8,264**	**7,157**	**8,264**

30. Fair value information

Fair value hierarchy

The table below analyses assets and liabilities carried at fair value. The different levels are defined as follows:

Level 1: Quoted unadjusted prices in active markets for identical assets or liabilities that the Group can access at measurement date.
Level 2: Inputs other than quoted prices included in level 1 that are observable for the asset or liability either directly or indirectly.
Level 3: Unobservable inputs for the asset or liability.

		GROUP		CSIR	
		2025	2024	2025	2024
	Notes	R'000	R'000	R'000	R'000
Levels of fair value measurements					
Level 2: Recurring fair value measurements					
Assets					
Financial instruments					
Investments in debt instruments	18	656,649	587,752	656,649	587,752
Total		**656,649**	**587,752**	**656,649**	**587,752**
Level 3: Recurring fair value measurements					
Assets					
Non-financial assets					
Land	8	187,333	138,400	187,333	138,400
Total		**187,333**	**138,400**	**187,333**	**138,400**

The fair value of land was determined by external, independent property valuers, having appropriate recognised professional qualifications and experience in the location and category of the property being valued.

The fair value measurement for land has been categorised as a Level 3 fair value based on the inputs to the valuation technique used. The valuations were performed using the comparable sales approach.

30. Fair value information (continued)

The key inputs under this approach are:

- Identify comparable properties in terms of location, size, age condition and features.
- Adjust the differences in terms of size, location, condition and features.
- Analyse adjusted sales prices of the comparable sales.
- Estimate the value of the subject property based on the sales prices of the comparable properties and make the necessary adjustments.

31. Related parties

Relationships	
Minister	Dr Blade Nzimande
Holding entity	Department of Science, Technology and Innovation
Subsidiaries	CSIR C^3 SOC Ltd (100%). Refer to note 10.
Joint ventures	Sera (Pty) Ltd (50%). Refer to note 11.
Associates	Persomics AB (35.03%). Refer to note 11.
Entities in Ministerial Portfolio	Department of Science, Technology and Innovation and other related entities under the holding entity.
National and Provincial Government	All national and provincial government departments and their related entities.
Directors and key management	Directors and key management. Refer to note 26.

The CSIR is a schedule 3B National Government Business Enterprise in terms of the Public Finance Management Act, 1999 (Act 1 of 1999) as amended by Act 29 of 1999, and therefore falls within the national sphere of government. As a consequence, the CSIR has a significant number of related parties, being all national and provincial government departments, as well as their related entities. Amounts due from/to these entities are subject to the same terms and conditions as normal trade receivables and trade payables.

In addition, the CSIR has a related party relationship with its subsidiaries and joint ventures and associates (see notes 10 and 11). Unless specifically disclosed, these transactions are concluded at arm's length and the Group is able to transact with any entity.

31. Related parties (continued)

	GROUP		CSIR	
	2025	2024	2025	2024
	R'000	R'000	R'000	R'000
Transactions with related parties				
Constitutional institutions				
Services rendered	3,979	2,837	3,979	2,837
Services received	113	-	113	-
Amount due from	4,130	2,315	4,130	2,315
Major public entities				
Services rendered	453,435	339,379	453,435	339,379
Services received	42,513	47,888	42,513	47,888
Amount due from	58,762	56,864	58,762	56,864
National public entities				
Services rendered	143,274	115,469	143,274	115,469
Services received	43,536	24,227	43,536	24,227
Amount due from	10,105	15,034	10,105	15,034
National government business enterprises				
Services rendered	9,016	4,525	9,016	4,525
Services received	697	2,075	697	2,075
Amount due from	6,554	4,530	6,554	4,530
Government departments				
Services rendered *	2,275,240	2,063,263	2,275,240	2,063,263
Services received	7,801	10,463	7,801	10,463
Amount due from	391,289	114,758	391,289	114,758
Subsidiaries				
Amount due to	-	-	(13)	(13)

The above is a summary of transactions with related parties during the year and balances due at year-end.

* Included in the amount for services rendered to government departments is R2,8 million (2024: R598 thousand) from the Department of Science, Technology and Innovation that was utilised for the operational support of CSIR C[3].

Transactions with key management

Total remuneration of key management is included in employees' remuneration (refer to note 26 for Executive Management's remuneration).

32. Irregular and fruitless and wasteful expenditure

	2025	2024 Restated	2025	2024 Restated
	R'000	R'000	R'000	R'000
Irregular expenditure	5,661	1,798[1]	5,661	1,798[1]
Fruitless and wasteful expenditure	-	43[2]	-	43[2]
Total (inclusive of VAT)	**5,661**	**1,841**	**5,661**	**1,841**

The 2024 numbers have been restated in compliance with the 2022 PFMA Compliance and Reporting Framework (Annexure A – National Treasury Instruction Note No. 04 of 2022-23) which requires that irregular and fruitless and wasteful expenditure for the previous financial year include amounts that were under assessment in that financial year and confirmed in the current financial year.

(1) The 2024 disclosed amount has been restated from Rnil to R1,798 million, being the amount which was under assessment in the prior financial year and confirmed in the current financial year.
(2) The 2024 disclosed amount has been restated from Rnil to R43 thousand, being the amount which was under assessment in the prior financial year and confirmed in the current financial year.

33. Capital commitments

	GROUP		CSIR	
	2025	2024	2025	2024
	R'000	R'000	R'000	R'000
Property, plant and equipment	101,306	470,203	101,306	470,203

Included in the prior financial year capital commitments was an amount of R302,4 million for a High-Performance Computing (HPC) System. The system was purchased in the current financial year. Refer to notes 8, 12 and 21 for more detail on the acquisition and funding of this system.

34. Financial guarantees

Local and foreign payment and performance guarantees issued as at 31 March	8,979	19,827	8,979	19,827

35. Subsequent events

In mid-April 2025, the CSIR announced its intention to implement a targeted operational efficiency plan. This initiative is focused on optimising specific operational areas to enhance future performance and ensure long-term sustainability. The plan is expected to include workforce adjustments in selected areas.

Associated costs of the restructuring are estimated at approximately R38,9 million. These costs will be recognised in the 2025/26 financial year when the detailed implementation plan is finalised and communicated to affected parties, creating a constructive obligation.

This strategic initiative is part of the CSIR's proactive management approach to strengthen its financial position and operational effectiveness. The organisation maintains adequate financial resources to implement these changes while continuing to fulfill its core operational objectives.

36. New Standards and Interpretations

36.1 Standards and interpretations effective and adopted in the current year

In the current year, the Group has adopted the following standards and interpretations that are effective for the current financial year and that are relevant to its operations:

Standard/Interpretation:	Effective date: Financial years beginning on or after
Supplier finance arrangements: Amendments to IAS 7 and IFRS 7 The amendment supplements existing disclosure requirements by requiring a company to disclose specific information about its supplier finance arrangements that enables users of financial statements to assess the effects of those arrangements on the company's liabilities and cash flows and on the company's exposure to liquidity risk. This amendment has not affected the Group's results, nor has it resulted in additional disclosures.	1 January 2024
Lease liability in a sale and leaseback: Amendment to IFRS 16 The narrow-scope amendment requires a seller-lessee in a sale and leaseback transaction to determine 'lease payments' or 'revised lease payments' in a way that the seller-lessee would not recognise any amount of a gain or loss relating to the right of use retained by the seller-lessee. The new requirement does not prevent the seller-lessee from recognising in profit or loss any gain or loss relating to the partial or full termination of a lease. This amendment has not affected the Group's results.	1 January 2024
Classification of liabilities as current or non-current: Amendment to IAS 1 Classification of liabilities as current or non-current: Narrow-scope amendments to IAS 1 to clarify how to classify debt and other liabilities as current or non-current. Non-current liabilities with covenants: The amendment clarifies that only covenants with which an entity is required to comply on or before the reporting date affect the classification of a liability as current or non-current, with additional guidance to explain how an entity should disclose information in the notes to understand the risk that non-current liabilities with covenants could become repayable within twelve months. These amendments have not affected the Group's results.	1 January 2024

36. New Standards and Interpretations (continued)

36.2 Standards and interpretations not yet effective

The Group has chosen not to early adopt the following standards and interpretations, which have been published and are mandatory for the Group's accounting periods beginning on or after 1 April 2025 or later periods:

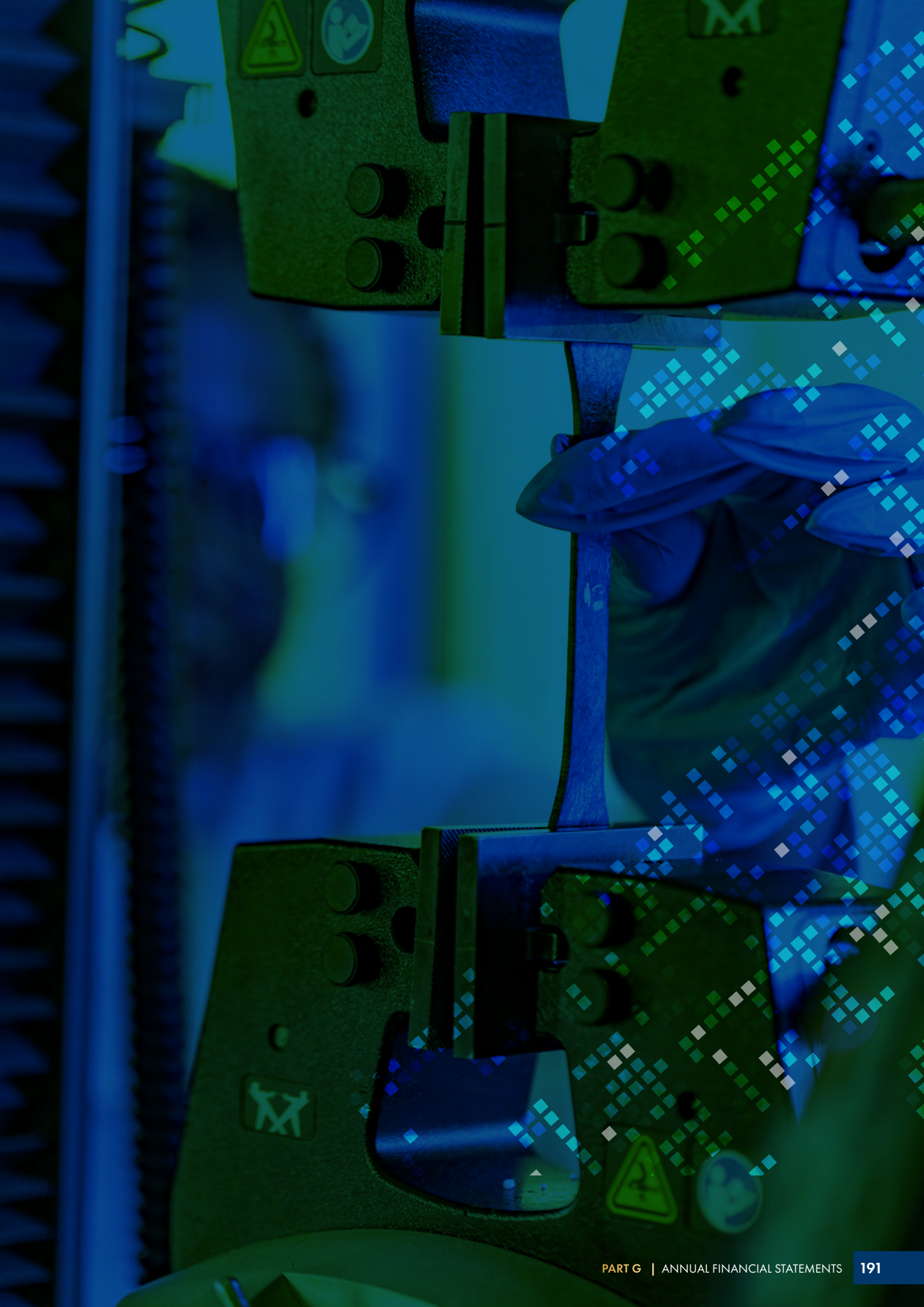
Standard/Interpretation:	Effective date: Financial years beginning on or after
Lack of exchangeability: Amendments to IAS 21 The amendments require an entity to apply a consistent approach to assessing whether a currency is exchangeable into another currency and, when it is not, to determining the exchange rate to use and the disclosures to provide. These amendments are not expected to affect the Group's results.	1 January 2025
Classification and measurement of financial instruments: Amendments to IFRS 9 and IFRS 7 The amendments to IFRS 7 introduce additional disclosure requirements to enhance transparency for investors regarding investments in equity instruments designated at fair value through other comprehensive income and financial instruments with contingent features, for example features tied to environmental, social and government (ESG) linked targets. Narrow scope amendments to address diversity in accounting practice by making the classification and measurement requirements of IFRS 9 more understandable and consistent, by: - Clarifying the classification of financial assets with environmental, social and corporate governance (ESG) and similar features; - Clarifying and adding further guidance for assessing whether a financial asset meets the solely payments of principal and interest (SPPI) criterion; and - Clarifying the date on which a financial asset or financial liability is derecognised when a liability is settled through electronic payment systems. These amendments also introduce an accounting policy option to allow a company to derecognise a financial liability before it delivers cash on the settlement date if specified criteria are met. These amendments are not expected to affect the Group's results.	1 January 2026

36. New Standards and Interpretations (continued)

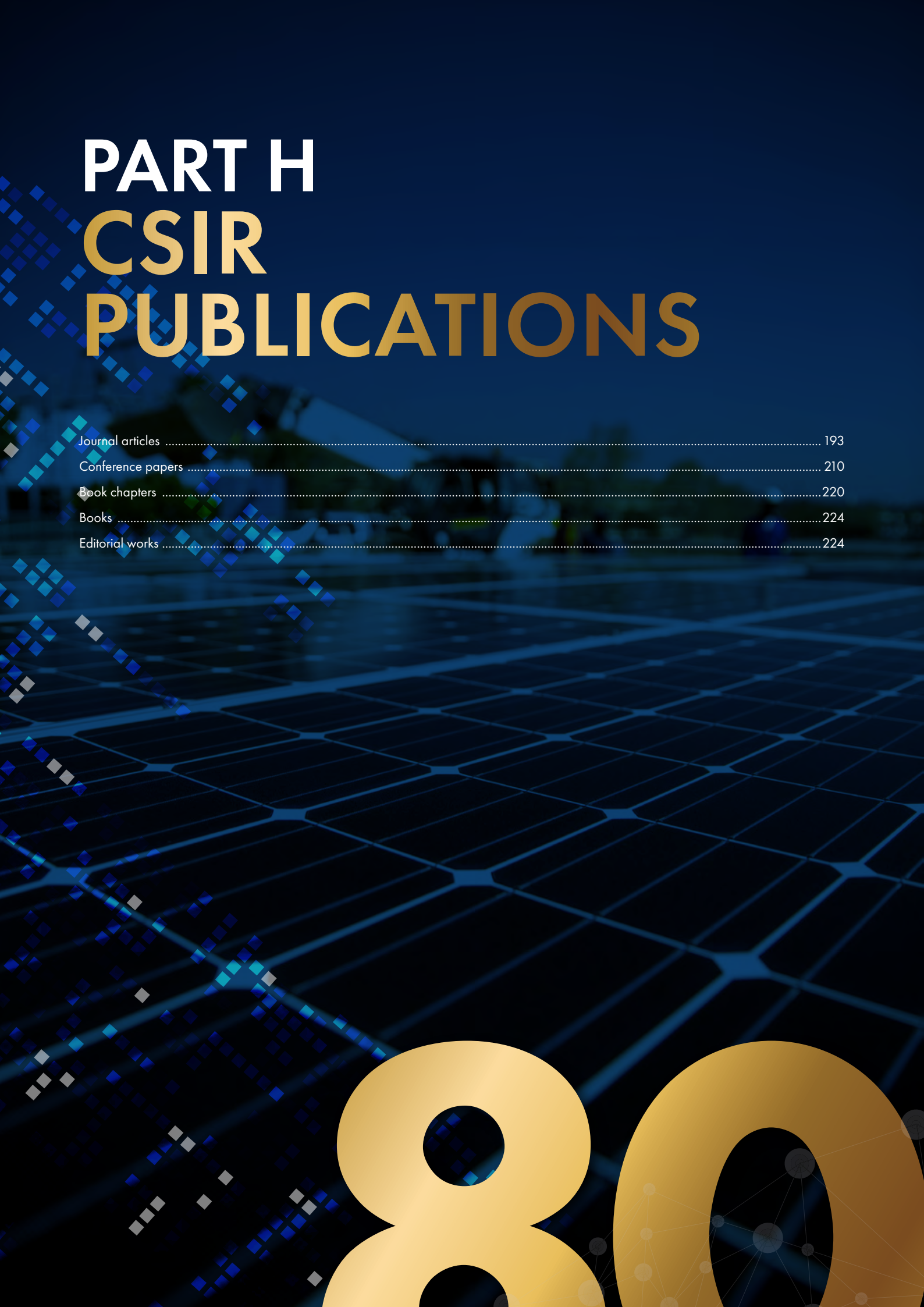
Standard/Interpretation:	Effective date: Financial years beginning on or after
Annual improvements to IFRS Accounting Standards – Volume 11 Annual improvements are limited to changes that either clarify the wording in an accounting standard or correct relatively minor unintended consequences, oversights or conflicts between the requirements in the accounting standards. The 2024 amendments are to the following standards: **IFRS 1 First-time adoption of International Financial Reporting Standards** Hedge accounting by a first-time adopter: Narrow scope amendment to improve consistency with and understanding of the requirements in IFRS 9 Financial Instruments in relation to hedge accounting requirements for a first-time adopter. **IFRS 7 Financial Instruments: Disclosures** Gain or loss on derecognition: Narrow scope amendment to delete an obsolete reference that remained in IFRS 7 following the publication of IFRS 13 Fair Value Measurement and to make the wording of the requirements of IFRS 7 relating to disclosure of a gain or loss on derecognition consistent with the wording and concepts in IFRS 13. **IFRS 9 Financial instruments** Two narrow scope amendments were made to IFRS 9: - Derecognition of lease liabilities. The amendment clarifies that, when a lessee has determined that a lease liability has been extinguished in accordance with IFRS 9, the lessee is required to recognise any resulting gain or loss arising from the difference between the carrying amount of the lease liability extinguished or transferred and any consideration paid in profit or loss. - Transaction price. Removal of an inconsistency between the requirements of IFRS 9 and the requirements in IFRS 15 Revenue from Contracts from Customers in relation to the initial measurement of trade receivables at their transaction price. The amendment clarifies that trade receivables must be measured at the amount determined by applying IFRS 15. **IFRS 10 Consolidated Financial Statements** Determination of a 'de facto agent': Narrow scope amendment to clarify whether a party acts as a de facto agent in assessing control of an investee. **IAS 7 Statement of cash flows** Cost method: Narrow scope amendment to replace the term 'cost method' with 'at cost' following the earlier removal of the definition of 'cost method' from IFRS Accounting Standards. These amendments are not expected to affect the Group's results, however additional disclosures may be required.	1 January 2026
Contracts referencing nature-dependent electricity: Amendments to IFRS 9 and IFRS 7 Narrow scope amendment adding new disclosure requirements to enable investors to understand the effect of contracts referencing nature-dependent electricity on an entity's financial performance and cash flows. Narrow scope amendment to allow entities to better reflect contracts referencing nature-dependent electricity (for example, renewable power purchase agreements or PPAs) by: - clarifying the application of the 'own-use' requirements of IFRS 9; and - permitting hedge accounting if these contracts are used as hedging instruments by parties to the contracts. This amendment is not expected to affect the Group's results.	1 January 2026

36. New Standards and Interpretations (continued)

Standard/Interpretation:	Effective date: Financial years beginning on or after
Presentation and disclosure in Financial Statements: IFRS 18 IFRS 18 is the culmination of the International Accounting Standards Board's ("IASB®") Primary Financial Statements project. IFRS 18 introduces three sets of new requirements to improve companies' reporting of financial performance and give investors a better basis for analysing and comparing companies: - Improved comparability in the statement of profit or loss (income statement) through the introduction of three defined categories for income and expenses (operating, investing and financing) to improve the structure of the income statement, and a requirement for all companies to provide new defined subtotals, including operating profit. - Enhanced transparency of management-defined performance measures with a requirement for companies to disclose explanations of those company-specific measures that are related to the income statement. - More useful grouping of information in the financial statements through enhanced guidance on how to organise information and whether to provide it in the primary financial statements or in the notes, as well as a requirement for companies to provide more transparency about operating expenses. This Standard replaces IAS 1 Presentation of Financial Statements. It carries forward many requirements from IAS 1 unchanged. This standard will result in changes to the presentation and disclosure of the Group's results.	1 January 2027
Subsidiaries without public accountability: Disclosures: IFRS 19 IFRS 19 permits eligible subsidiaries to use IFRS Accounting Standards with reduced disclosures. Applying IFRS 19 will reduce the costs of preparing subsidiaries' financial statements while maintaining the usefulness of the information for users of their financial statements. Subsidiaries are eligible to apply IFRS 19 if they do not have public accountability and their parent company applies IFRS Accounting Standards in their consolidated financial statements. A subsidiary does not have public accountability if it does not have equities or debt listed on a stock exchange and does not hold assets in a fiduciary capacity for a broad group of outsiders. Subsidiaries in the Group are expected to apply reduced disclosures.	1 January 2027



PART H
CSIR PUBLICATIONS



2024 CSIR LIST OF PEER REVIEWED PUBLICATIONS:

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